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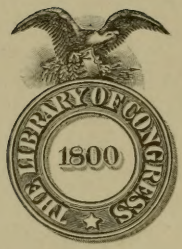

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U. S. DEPARTMENT OF AGRICULTURE,
FOREST SERVICE.
HENRY S. GRAVES, Forester.

THE NATIONAL FOREST MANUAL.

REGULATIONS OF THE SECRETARY OF AGRICULTURE AND INSTRUCTIONS TO FOREST OFFICERS RELATING TO THE GENERAL ADMINISTRATION OF THE FOREST SERVICE, AND THE PROTECTION AND USE OF THE NATIONAL FORESTS.

ISSUED BY THE
SECRETARY OF AGRICULTURE,
TO TAKE EFFECT
AUGUST 12, 1912.

GENERAL ADMINISTRATION AND PROTECTION.

WASHINGTON:
GOVERNMENT PRINTING OFFICE.
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The Secretary * * * may make such rules and regulations * * * as will insure the objects of such reservations, namely, to regulate their occupancy and use and to preserve the forests thereon from destruction; and any violation of the provisions of this act or such rules and regulations shall be punished [by $500 fine or 12 months' imprisonment, or both] as is provided for in the act of June 4, 1888, amending section 5388 of the Revised Statutes of the United States. (Act of June 4, 1897, 30 Stat., 11.)

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CONTENTS

	Page.
Regulations:	
Age limit of applicants for ranger	11
Maximum rates for meals and lodging	11
Forage	11
Appeals from disciplinary action	11
Accessibility of public records	11
Cooperation in enforcing State fire laws	12
Fire protection cooperative agreements	12
Protection of water supply	12
Sale of condemned property	12
The National Forests:	
Their purpose	13
History of their establishment	13
The Forest Service:	
Establishment	15
Relation of forest officers to the public	15
The field organization of the Forest Service:	
Districts	15
National Forests	15
Forest officers	15
Field officers	15
Skilled and unskilled laborers	16
Clerks	16
Division of Accounts	16
Office of the Solicitor	16
District committees	16
Duties of Service and district officers and supervisors when in the field:	
Washington officers	17
District officers	17
Instructions issued in the field	17
Inspectors	17
Authority of supervisor	17
Field equipment and expenses of forest officers:	
Equipment	17
Subsistence and lodging	18
Subsistence in lieu of salary	18
Subsistence at ranger stations	18
Subsistence from forest users	18
Forage	18
Supplies for motor vehicles	18
Transfer of household effects	19
The forest badge	19
When not on duty	19
Summary of comparative cost of living expenses	19
Quarters:	
District offices	19
Supervisors' offices	19
Rangers' offices, storage, and other quarters	20
Lease of land	20
Construction of buildings	20
Ranger stations	20
Quarters in Government buildings	20
Signs	21
Property notices	21
Use of flag	21
Maintenance of quarters	21
Equipment	21

	Page.
The administrative plan:	
The forest force	21
District rangers	21
Assistant for district rangers	22
Project assistants	22
Data for working plans to be obtained by specially qualified assistants	22
Preparation for making working plans	22
Allotment for working plan	22
Nontechnical assistance	22
Clerical assistants	22
Annual allotment estimate	23
The business of the forest	23
Outline of the forest organization	24
Estimate of allotment	24
Annual appropriation estimates	24
Control of forest force:	
Policy	24
Qualifications of forest officers	24
Relations between officers	24
Selection	25
Assignment	25
Authority to assign or transfer	25
Supervision	25
Probational appointments	25
Salaries and promotions	25
Outside employment	26
Leave of absence	26
Furlough	26
Personnel reports	26
Diaries	26
Record of distribution of service	27
Records of conferences	27
Development of employees	27
Instructional assignments	27
Ranger meetings	27
Rangers' reading courses	28
Attendance of forest officers at public meetings	28
Temporary details to Washington office	28
Temporary details to the district offices	28
Amendments to Forester's authorization	28
Efficiency	28
Misconduct	28
Rules for conduct	29
Political activity	29
Political assessments or contributions	30
Patents	31
Disciplinary measures	31
Transfers	31
Suspensions	31
Demotions	31
Reprimands	32
Removal	32
Enforced resignation	32
Appeals	32
Procedure	32
Civil Service eligibles	32
When names on register may be passed	32
Rangers appointed for administrative work only	33
Ranger eligibles for protective work appointed guards	33
Requests for certification	33
Procedure for appointments, changes of grade or assignments, and separations	33
Administrative letters	33
Officers to be notified in advance of contemplated action	33
Removals and reductions	33
Time limit to suspension pending disciplinary action	34
Letters recommending personnel changes	34
Care in giving names	34

Control of forest force—Continued. Page.
Compensation for injuries ... 34
Changes in regulations and instructions ... 34
Issued from Washington ... 34
Issued from district offices ... 35
Official correspondence:
Classification ... 35
Washington office ... 35
Departmental correspondence ... 35
Service correspondence ... 35
Branch correspondence ... 35
Office correspondence ... 35
District office ... 35
Departmental and Service correspondence ... 36
District correspondence ... 36
Supply depot and property audit correspondence ... 36
Signing ... 36
Prompt action required ... 36
Washington office ... 36
District offices—details as acting district forester ... 36
Supervisors' offices ... 36
Clerks seldom acting supervisor ... 36
Distribution ... 37
Duties of mail clerk ... 37
References to other offices and districts ... 37
Reference to other departments and bureaus ... 37
Letters on law matters ... 37
Form of correspondence ... 37
Washington and district offices ... 37
Spacing ... 37
Neatness ... 37
Copying ribbon—Record ribbon ... 37
Margin ... 38
Legal documents ... 38
Numbering pages—Initialing pages ... 38
Paper ... 38
Date ... 38
Address ... 38
Salutation ... 38
Complimentary close ... 38
Language—Brevity ... 38
Avoid preambles ... 38
Form of acknowledgment—Reference to key initials ... 38
Courtesy ... 38
Severity ... 39
Impersonal tone ... 39
Punctuation ... 39
Promises ... 39
Letters of identical instructions ... 39
National Forest offices ... 39
Supervisors' offices ... 39
Rangers' correspondence ... 39
Record of promises ... 39
The promise card box ... 39
Follow-up system ... 40
Requests to field officers ... 40
Carbons ... 40
Carbons mailed for information ... 40
Instructions in carbons ... 40
Carbons to secure approval of recommended action ... 41
Initialing ... 41
Every document must be dated and initialed or signed ... 41
Washington and district offices ... 41
Letters affecting more than one branch ... 41
Stenographer's initials—Initialing for inclosures or promised action ... 41
Telegrams ... 41
Supervisor's office ... 42

Office correspondence—Continued. Page.
Mailing ... 42
Washington office ... 42
District offices ... 42
Supervisors' offices ... 42
Envelopes and inclosures ... 43
Identification of material mailed separately ... 43
Filing ... 43
Washington office ... 43
District office ... 43
Description of files ... 43
Circular letters ... 44
Cross reference ... 44
Rangers' files ... 44
Rangers' record ... 44
Transferring ... 44
Washington, district, and supervisors' offices ... 44
Boundaries:
General ... 45
Creation by President authorized by act of Congress ... 45
Creation restricted in six States ... 45
Temporary withdrawals ... 46
National monuments ... 46
What may be included ... 46
Cooperation in selection ... 46
Not to be listed to homesteaders ... 46
Boundary changes ... 46
Policy—Additions and eliminations ... 46
Inter-Forest boundaries ... 46
State school land—exchange ... 47
Town sites ... 47
Procedure ... 47
Supervisors' procedure ... 47
Examinations ... 47
Extent of examinations ... 47
Data necessary ... 47
Field work and survey ... 47
Photographs ... 47
Maps ... 47
Land classification map ... 48
Title map ... 48
The boundary ... 48
Report ... 48
Outline ... 48
Report submitted to supervisor ... 49
Inter-Forest changes ... 49
Temporary withdrawals ... 49
National monuments ... 49
District office procedure ... 49
Action on reports and maps ... 49
Secretary's letter ... 49
Press notice ... 49
Number of lithographic prints ... 49
Ranger stations retained as isolated tracts ... 49
Recommendations for withdrawals ... 49
Release of withdrawals ... 50
National monuments ... 50
Washington office procedure ... 50
Action on petitions and inquiries ... 50
Action on boundary reports ... 50
Proclamation and Executive orders, prepared in Washington office, referred to Solicitor ... 51
Proclamation diagrams, requisition ... 51
Photographic prints ... 51
Post cards attached ... 51
Announcement of signature ... 51
Press notice ... 51
Transfer print and lithographic copies ... 51

Boundaries—Continued.
Procedure—Continued.
Washington office procedure—Continued. Page.
Maps returned to District Forester 51
Eliminations open to settlement and entry 51
Action on temporary withdrawal 51
Release 52
Notice of release returned to District Forester 52
National monuments 52
Graphic information:
Forest surveys and maps 52
Surveying National Forest boundaries 52
Marking boundaries 52
Boundary posters 52
Replacements and restoration of corners 52
Special surveys 52
Corners and marks protected by law 52
Record of boundary survey 52
Map making 53
The Forest atlas 53
Scale 53
District atlas 53
Corrections 53
New data 54
General maps 54
Working-plan maps 54
Field surveys 55
Reconnaissance surveys 55
Special maps 55
Maps issued by other departments 56
Township plats 56
Photographs 56
Photograph laboratory, Washington 66
Requisitions for photographic work 56
Prints for official and personal use 57
Lantern-slide collection 57
Sale of prints 57
Use of prints to be stated in requisition 57
Schedule of prices 57
Substitutes for defective prints sold 58
Policy 58
In the field 58
Cameras 58
Films 59
Notebooks 59
Films developed and prints made in the field 59
Notice of purchase of films 55
General 59
Publications:
Preparation of official publications 59
Selection of subjects 59
Preparation of manuscripts 60
Publication credits 60
Review of manuscripts 61
Distribution of publications 62
Field program 62
Educational activities:
Information for the press 62
Material for technical and other periodical publications 63
Addresses 63
Protection from fire:
Need for protection 63
What governs protection 64
Methods of fire protection 64
Measures for protection 64
The fire plan 64
Maximum efficiency with minimum expense 64
Collection of information 64

Protection from fire—Continued.
The fire plan—Continued. Page.
Maps 64
Special protective surveys 65
Statistical information 65
The fire liability 65
Reduction of liability 65
The fire hazard 65
Reduction of hazard 65
Prevention and control 65
Transportation and communication 65
Firebreaks 65
Classes of firebreaks 66
Character of firebreaks 66
Maps 66
Construction 66
Lookout system 66
Prevention 66
Cooperation 66
Protective stipulations 67
Equipment 67
Transportation and supplies 67
Foremen 67
Labor for fighting fires 67
Location and addresses of forest officers and fire wardens 67
Slash burning 67
Fire fighting 67
Detailed instructions 67
Organization 68
Season of low hazard 68
Season of high hazard 68
Supervision and direction 68
Assistants to district ranger 68
Patrolmen 68
Instructions as to duties 68
Control 68
Action on discovery of fires 68
Fire fighting 69
Reports 69
Protection of water supply:
Importance of protection 69
Use of forest resources when not injurious to protective cover 69
Water protection plan 69
Map 69
Report 70
Procedure 70
Stipulations in permits and contracts 70
Cooperative agreements 70
Form of agreement 70
Instructions to carry out terms of agreements 71
Protection of the public health 71
Forest Products:
Organization 72
Character of work 72
Mechanical and physical properties and structures of wood 72
Wood preservation 72
Derived products 73
Statistical studies 73
Scope of work 73
Cooperation 74
Duties of products men in district offices 75
Duties of supervisors in relation to products work 75
Improvements:
Policy 76
Transportation 76
Transportation plans 76
Map 76
Roads and trails 76

Improvements—Continued.
Transportation—Continued. Page.
Bridges 77
Water transportation 77
Speeders 77
Purchase of equipment 77
Communication 77
Signals 77
Mail service 77
Telephones 77
Telephone plans 78
Range improvement 78
Timber sale improvements 78
Protective improvements 78
Ranger stations 78
Cost 78
Survey of administrative sites 79
Procedure 79
Allotments 79
Improvement contingent 79
Cost keeping 79
Annual statistical report (Form 446) 79
Cooperation 79
Rights of way 79
Title to lands for improvement 80
Signs 80
Disposal of débris 80
Contracts 80
Requests for bids 80
The purchase of material 80
Contracted materials 80
Purchase of barb wire 80
Standard telephone equipment 81
Telephone wire 81
"U. S. F. S." stock 81
Insulators and brackets—Instruments 81
Purchase of improvements 81
Relinquishment of unperfected entry 81
Property:
Custody and accountability 81
Responsibility 81
Individual accountability 82
Service accountability 82
Expendable and nonexpendable property 82
Supply depot, Ogden, Utah 82
Requisitions 82
Shortage or error in shipment 83
Methods of shipment 83
Property procured by purchase 83
Forest custodian 84
Property procured by transfer 84
Property to individuals 84
Property accounting on the National Forests 84
Custodian's record 84
Ranger's record 85
Loss of property 85
Abandonment 86
Condemnation of property having no sale value 86
Condemnation of property having a sale value 86
Annual property return 87
Property auditor's report 87
Property inspection 87
Storage 87
Final settlement 87

U. S. Department of Agriculture,
Office of the Secretary,
Washington, D. C.

By virtue of the authority vested in me by the act of Congress of February 1, 1905 (33 Stat., 628), amendatory of the act of Congress of June 4, 1897 (30 Stat., 11), I, James Wilson, Secretary of Agriculture, do make and publish the following regulations relating to the general administration of the Forest Service and the protection of the National Forests, the same to supersede all previous regulations for like purposes and to be in force and effect from the date of this order, and to constitute a part of the Use Book.

In testimony whereof I have hereunto set my hand and official seal at Washington, D. C., this 12th day of August, 1912.

[seal.]

James Wilson,
Secretary of Agriculture.

THE NATIONAL FOREST MANUAL.

REGULATIONS.

Age Limit of Applicants for Ranger.

Reg. G. A.–1. Only citizens of the United States and those who have declared their intention to become such, and who are between the ages of 21 and 40, are eligible for ranger examinations. Selection for appointment will be made when practicable from qualified citizens of the State in which the National Forests, respectively, are situated. These qualifications will not be waived under any circumstances.

Maximum Rates for Meals and Lodging.

Reg. G. A.–2. The Forester may make and determine maximum rates within the amount allowable under the Fiscal Regulations for travel expenses of employees of the Forest Service, such rates to be equitable and according to the standard of living in the various localities in which they are to become operative. Maximum rates may be established in the following classes: For meals and lodging of employees on detail to Washington or the district offices; meals and lodging at other points visited by Forest officers or employees; meals at ranger stations. This authority may be delegated, if necessary, to the District Foresters.

Forage.

Reg. G. A.–3. Forest officers or employees regularly assigned to field duty may be required to own and equip the saddle and other animals necessary to carry on their official duties. Feed for animals so used, owned by Forest officers or employees, will be furnished in whole or in part as may be deemed equitable by the Forester, either by purchase or by growing such feed on National Forest lands. When a motor-driven vehicle, such as a motor cycle or an automobile, is used by a Forest officer in lieu of saddle horses or other animals in the performance of his official duties, gasoline, oil, and carbide for motor cycles or automobiles so used will be furnished in whole or in part, as may be deemed equitable by the Forester.

Appeals from Disciplinary Action.

Reg. G. A.–4. The officer or employee of the Forest Service affected by any disciplinary measure administered may take an appeal to the District Forester and from the District Forester to the Forester, and from the Forester to the Secretary of Agriculture, but no appeal will be considered by the Secretary unless the Forester has affirmed the decision of the District Forester adverse to the appellant. In no case will an attorney be recognized in personnel matters.

Accessibility of Public Records.

Reg. G. A.–5. In general, the papers on file in the offices of the Forest Service relating to the transaction of National Forest business are public records, and as such are open to the public. Information should not be refused to persons whose interest is legitimate. Recommendations on matters pending should not be made public. Equal opportunities for information must be given to all persons having an interest in any transaction. In conformity with the practice, and at the request of the Department of the Interior, all reports on public-land claims will be treated as confidential, and may be examined only by duly authorized officers and employees of the Government. Reports on June 11 applications and personnel reports are confidential, and may be examined only by duly authorized officers of the Government. Under no circumstances will inquirers be permitted to take papers from the files outside of the building.

Cooperation in Enforcing State Fire Laws.

Reg. G. A.–6. All Forest officers will cooperate with State officials, so far as practicable, to enforce State laws for the prevention and extinguishment of forest fires. When authorized to do so by the proper State officers, they will, without additional pay, act as fire wardens with full power to enforce the local laws.

Fire Protection Cooperative Agreements.

Reg. G. A.–7. The Forest Service shall, whenever possible, and is hereby authorized to, enter into such agreements with private owners of timber, with railroads, and with other industrial concerns operating in or near the National Forests as will result in mutual benefit in the prevention and suppression of forest fires; provided, that the service required of each party by such agreements shall be in proportion to the benefits conferred.

Protection of Water Supplies. Cooperative Agreements.

Reg. G. A.–8. For the purpose of protecting water supplies of towns, cities, and irrigation districts, the use of National Forest lands will be restricted by the Secretary of Agriculture, with such conditions as to reservations from other uses of the land and to assistance to be given the Forest Service by the town or city in establishing special protective measures as may be deemed necessary or advisable. Such use will be granted under formal agreement between the Secretary of Agriculture and the properly authorized official of the town, city, or irrigation district.

Sale of Condemned Property.

Reg. G. A.–9. The Forester is authorized to sell at field stations of the Forest Service, after public notice, by advertisement or otherwise, such articles of equipment as are worn out or damaged beyond repair, or which are of no further use in the Service, but which have a sale value estimated at $500 or less. The Forester may delegate the authority to district officers. When the estimated sale value is more than $500, special authority must be obtained from the Secretary of Agriculture.

PROCEDURE AND INSTRUCTIONS.

U. S. DEPARTMENT OF AGRICULTURE,
FOREST SERVICE,
Washington, D. C.

The following procedure and instructions are hereby established to take effect August 12, 1912, governing the enforcement of the regulations of the Secretary of Agriculture, relating to the general administration of the Forest Service and the protection of the National Forests.

H. S. GRAVES, *Forester.*

Approved August 12, 1912.
JAMES WILSON, *Secretary.*

THE NATIONAL FORESTS.

THEIR PURPOSE.

National Forests have for their objects to insure a perpetual supply of timber, to preserve the forest cover which regulates the flow of streams, and to provide for the use of all resources which the Forests contain, in the ways which will make them of largest service. Largest service means greatest good to the greatest number in the long run. It means conservation through use, with full recognition of all existing individual rights and with recognition also that beneficial use must be use by individuals; but without the sacrifice of a greater total of public benefit to a less. In other words, the Forests are to be regarded as public resources, to be held, protected, and developed by the Government for the benefit of the people.

The injury which results from the destruction of forests by fire and ill-regulated use is a matter of history in older countries, and has long been the cause of anxiety in the United States. A cheap and plentiful supply of timber is important if not necessary to the welfare of communities; a forest cover is the most effective means of maintaining a regular streamflow for irrigation and other purposes; and the future of the western live-stock industry depends upon the permanence of the range. Exhaustion of a local timber supply means the cessation of lumbering and the business activities dependent on it, and often leaves desolation, impoverishment, and industrial depression; there are vast public and private losses through unnecessary forest fires, while a rapidly growing population creates an increasing demand for lumber. With forest destruction the flow of streams becomes irregular just when development of the country makes them indispensable to transportation, manufacture, or irrigation. Without regulation there is serious decrease in the carrying capacity of the range. In short, forest protection is vital to the public welfare.

HISTORY OF THEIR ESTABLISHMENT.

As early as 1799, and again in 1817, Congress provided for the purchase of timber lands to supply the needs of the Navy. Other acts from time to time made similar provisions for setting apart forest land for specific purposes, but the first attempt to secure comprehensive administration of the forests on the public domain was in 1871, when a bill was introduced in the Forty-second Congress, which, however, failed of passage.

In 1876, $2,000 was appropriated to employ a competent man to investigate timber conditions in the United States, and on June 30, 1886, an act was approved creating a Division of Forestry in the Department of Agriculture. On July 1, 1901, this Division became the Bureau of Forestry, which, in turn, under the act of February 1, 1905, became the Forest Service.

With the increasing realization that the Nation's forest resources must be protected, and with the immense growth of irrigation interests in the West, the necessity for retaining permanent Federal control over selected forest areas was recognized by a brief section inserted in the act of March 3, 1891 (26 Stat., 1095), which authorized the President to establish forest reserves, now called National Forests. The first exercise of this authority was in the creation of the Yellowstone Park Timber Land Reserve, proclaimed by President Harrison March 30, 1891.

The mere creation and setting apart of forest reserves, however, without provision for their use, was both ineffectual and annoying to local interests dependent upon their resources. Consequently the Secretary of the Interior, in 1896, requested the National Academy of Sciences to recommend a national forest policy. This resulted in the passage of the act of June 4, 1897 (30 Stat., 11), under which, with subsequent enactments, National Forests are now administered.

On the theory that the management of land, not forests, was chiefly involved, this law gave the Secretary of the Interior authority over the Forests, and provided that they should be surveyed, mapped, and classified by the United States Geological Survey, and administered by the General Land Office. But the complex technical problems arising from the necessary use of forest and range soon demanded the introduction of scientific methods and a trained force, which could not be provided under the existing system. The advice and services of the Bureau of Forestry were found necessary, but, under the law, could be but imperfectly utilized. The necessity of consolidating the various branches of Government forest work became apparent, and was urged upon Congress by the President and by the executive officers concerned. Finally the act of February 1, 1905, transferred to the Secretary of Agriculture entire jurisdiction over the National Forests, except in matters of surveying and passage of title to land.

The regulations and instructions for the use of the National Forests here published are in accordance with the organic acts and with the various supplementary and amendatory laws passed since June 4, 1897. They are based upon the general policy laid down for the Forest Service by the Secretary of Agriculture in his letter to the Forester dated February 1, 1905:

"In the administration of the forest reserves it must be clearly borne in mind that all land is to be devoted to its most productive use for the permanent good of the whole people, and not for the temporary benefit of individuals or companies. All the resources of forest reserves are for use, and this use must be brought about in a thoroughly prompt and businesslike manner, under such restrictions only as will insure the permanence of these resources. The vital importance of forest reserves to the great industries of the Western States will be largely increased in the near future by the continued steady advance in settlement and development. The permanence of the resources of the reserves is therefore indispensable to continued prosperity, and the policy of this department for their protection and use will invariably be guided by this fact, always bearing in mind that the conservative use of these resources in no way conflicts with their permanent value.

"You will see to it that the water, wood, and forage of the reserves are conserved and wisely used for the benefit of the home builder first of all, upon whom depends the best permanent use of lands and resources alike. The continued prosperity of the agricultural, lumbering, mining, and live-stock interests is directly dependent upon a permanent and accessible supply of water, wood, and forage, as well as upon the present and future use of these resources under businesslike regulations enforced with promptness, effectiveness, and common sense. In the management of each reserve local questions will be decided upon local grounds; the dominant industry will be considered first, but with as little restriction to minor industries as may be possible; sudden changes in industrial conditions will be avoided by gradual adjustment after due notice, and where conflicting interests must be reconciled the question will always be decided from the standpoint of the greatest good of the greatest number in the long run."

THE FOREST SERVICE.

ESTABLISHMENT.

The Secretary of Agriculture is empowered by Congress to "make such rules and regulations, and to establish such service as will insure the objects of such reservations [National Forests], namely, to regulate their occupancy and use, and to preserve the forests thereon from destruction." Under the provisions of this act the Secretary has made and published regulations relating to the protection and use of the National Forests, and has established the necessary service to carry such regulations into effect.

All permanent positions in the Forest Service are under the civil-service law. Vacancies are filled through certification by the Civil Service Commission, and information as to the times and places at which examinations will be held may be obtained only from the United States Civil Service Commission, Washington, D. C.

RELATION OF FOREST OFFICERS TO THE PUBLIC.

Forest officers are agents of the people. They must answer all inquiries fully and cheerfully, and be even more prompt and courteous in the conduct of Forest business than in private business. They must, of course, obey instructions and enforce regulations without fear or favor, they must not allow personal or other interests to weigh against the permanent good of the Forests; but it is no less their duty to encourage legitimate enterprises and to assist the public in making use of the resources of the Forests. They must make every effort to prevent misunderstanding and violation of Forest regulations, rather than to correct mistakes after they have been made. Information should be given tactfully, by advice and not by offensive warnings.

Persons who wish to make any use of the resources of a National Forest for which a permit is required should consult the nearest Forest officer, or, if more convenient, should write to the supervisor of the Forest upon which the use is desired.

THE FIELD ORGANIZATION OF THE FOREST SERVICE.

The administration of the National Forests and the conduct of all matters relating to forestry which have been placed upon the Department of Agriculture by Congress is, under the direction of the Secretary of Agriculture, in charge of the Forester, who is the Chief of the Forest Service. The office of the Forester is in Washington, D. C.

DISTRICTS.

For the better administration of the National Forests six districts have been established, with headquarters at the following places: *District 1*, Missoula, Mont.; *District 2*, Denver, Colo.; *District 3*, Albuquerque, N. Mex.; *District 4*, Ogden, Utah; *District 5*, San Francisco, Cal.; and *District 6*, Portland, Oreg. Each National Forest district embraces a number of National Forests, and the district officers are responsible for the general supervision and inspection of the administrative and technical work on the Forests within their respective districts.

NATIONAL FORESTS.

The forest areas are divided for the purposes of administration into convenient units of management, each of which is called a National Forest and is in charge of a forest supervisor. When the amount of business on a National Forest warrants it the forest supervisor is assisted by a deputy supervisor, who has such duties and authority as may be delegated to him by the Supervisor. The positions of forest supervisor and deputy forest supervisor are filled by promotion or transfer from classified positions in the Forest Service. The forest supervisor's headquarters are located at a place in or adjacent to the Forest from which the business can be conducted most conveniently and efficiently.

FOREST OFFICERS.

Field Officers.

The field work involved in directing the use, protection, and improvement of a National Forest is, under the supervision of the forest supervisor, performed by rangers, forest assistants, lumbermen, scalers, and planting assistants, all of whom are in the classified civil service. Appointment to any of these positions is made only from the eligible register resulting from competitive exami-

nations held by the United States Civil Service Commission, or by promotion. Rangers must be selected, when practicable, from qualified citizens of the States in which the National Forests respectively are situated.

Skilled and Unskilled Laborers.

The skilled and unskilled labor of a temporary character required in the use, protection, and improvement of the National Forests is performed by forest guards, field assistants, and temporary laborers. These positions are not in the classified civil service and are filled through selection by the forest supervisor or by officers in charge of field parties.

Clerks.

Clerical work in the supervisors' offices is performed by forest clerks, assisted by additional clerks if the amount of business warrants. The position of forest clerk, and of all clerks except those employed temporarily, is in the classified service and is filled by transfer or by appointment from the register of eligibles obtained from competitive examinations held by the Civil Service Commission. When lists of availables can be furnished by the commission temporary clerks are selected from such lists.

DIVISION OF ACCOUNTS.

Under the direction of the Chief of the Division of Accounts of the Department of Agriculture, the receipt and disbursement of the funds of the Forest Service, and the execution of all formal papers affecting the grade, assignment, or salary of members of the Forest Service, will be in charge of the chief of the Forest Service branch of the Division of Accounts and Disbursements. The chief of the Forest Service branch of accounts and disbursements is assisted by six district fiscal agents, each of whom has direct charge of all the work of the division arising in the district to which he is assigned. The district fiscal agent may be assisted by special disbursing officers, whose duties and authorities will be determined by the Secretary.

In each district a United States depository is designated which receives all revenues of the Forest Service in that district.

The chief of the Forest Service branch of the Division of Accounts and Disbursements and the district fiscal agents correspond directly with the members of the Forest Service in all matters pertaining to the settlement of accounts.

OFFICE OF THE SOLICITOR.

Under the direction of the Solicitor of the Department of Agriculture, the district assistants to the solicitor will be the advisors of the District Foresters and their assistants on all questions of law arising in the administration of the National Forests. The opinions of the district assistants will be binding on the District Foresters, except that in urgent cases an appeal may be taken through the Forester to the Solicitor.

All requests for formal opinions will be made in the form of written memoranda, accompanied, when possible, with all the papers in the case, and a full statement of facts out of which the request for an opinion arises. The district assistants to the solicitor will render their opinions in writing, addressed to the District Foresters. In matters of minor importance, where written and formal opinions are not necessary, or are impracticable, the District Foresters may informally consult with the district assistants.

All matters which have reached the stage where action in the courts is necessary must be referred to the district assistants to the solicitor. Thenceforth the cases will be entirely in their hands, and all correspondence in reference thereto will be conducted and prepared by them. If additional evidence is needed they will request the District Foresters to supply it.

The district fiscal agents will request and receive advice and opinions from the district assistants to the solicitor in the same manner.

DISTRICT COMMITTEE.

The district committee will consist of the District Forester and such executive officers as he may designate. The committee will meet once a week. The following order of business will be observed:

Reading of the minutes.
Unfinished business.
Reports of subcommittees.
Discussion of reports of subcommittees.
Reports of members of the committee.

The committee will discuss matters which relate to the administration of the National Forests and to work of the Forest Service and will make definite recommendations, but decisions will rest with the District Forester. Copies of the minutes of the committee meetings will be sent to the Forester, to each District Forester, and to the Director of the Madison Laboratory. Copies may also be sent to the supervisors of the district in which the meeting is held. The discussions are informal and confidential, and a large part of their value depends upon keeping them so. The minutes will not be taken as instructions and supervisors will therefore be careful not to draw hasty conclusions from the record of these discussions, where it may seem that unnecessary criticism has passed.

DUTIES OF SERVICE AND DISTRICT OFFICERS AND SUPERVISORS WHEN IN THE FIELD.

Washington Officers.

Administrative officers of the Washington office, when in the field, will not issue instructions to officers upon the National Forests, except in cases of grave emergency. In such cases the District Forester concerned will be informed immediately, in writing, by the administrative officer, of the character of such instructions, and to whom they were given.

When on duty in a district, members of the Washington office will act either as inspectors, within their respective fields, reporting directly to the Forester, or as executive officers under the direction of the District Forester, in accordance with the instructions from the Forester.

District Officers.

The District Foresters and assistant district foresters, and district officers designated by them, are authorized, within their respective fields, to give instructions to officers upon the National Forests within their districts. Other subordinate officers of the district office when on National Forests will, by assignment, act as inspectors within their respective fields, reporting directly to their chief, or as executive officers reporting directly to the supervisor.

Instructions Issued in the Field.

When a district officer issues instructions to a supervisor he should prepare a written memorandum of them to go into the forest supervisor's file. Orders to rangers and other field officers should be given only in emergency cases, and when such orders are found necessary they should be communicated, by the officer issuing them, to the supervisor as soon as possible. Copies of these memoranda should be sent to the District Forester whenever the action initiated by them requires further action in the district office or is needed for information.

When a district officer is in doubt concerning instructions to be given, especially when it concerns matters outside of the officer's special line of work, he will report the circumstances in detail to the District Forester.

Reports on controversies or complaints, which are settled on the ground by the district officer, will be filed for reference in the district office and a copy sent to the supervisor.

Inspectors.

Members of the Washington and district offices, when on National Forests under assignments as inspectors, will give no orders.

Authority of Supervisors.

The supervisor has full authority over all Forest officers detailed to the Forest of which he is in charge and may make such assignments and delegate such authority as he may consider necessary, provided such assignments or delegations of authority are not specifically prohibited.

FIELD EQUIPMENT AND EXPENSES OF FOREST OFFICERS.

Equipment.

Forest officers or employees assigned to field duty may be required to furnish themselves with the necessary means of transportation, with the requisite equipment. They may also be required to furnish themselves with necessary camp equipment. The supervisor will determine what equipment each officer on his Forest must provide. The District Forester will determine what field equipment the members of the district office and the supervisors must provide.

Subsistence and Lodging.

Forest officers and employees, unless it is specifically so provided by the terms of their employments or included in their appointment orders, will not receive subsistence or be reimbursed their expenses for subsistence and lodging, or other expenses, while at their permanent station or place of employment. They may, however, be reimbursed their expenses for travel, subsistence, and lodging, when absent from their official station on official business.

Extravagance will not be tolerated, since it is expected that an employee when traveling at Government expense will incur only those expenses which would be incurred were he traveling at his own expense.

Subsistence in Lieu of Salary.

Subsistence not provided for in travel authorizations may be furnished to Forest guards or other temporary employees serving under appointments by the Secretary of Agriculture when authorized by the terms of such appointments. In requesting such appointments the district foresters will recommend a reduction in the salary usually paid for the same grade of employee in an amount equivalent to the estimated cost of such subsistence.

Subsistence at Ranger Stations.

Rangers occupying ranger stations should be paid by visiting officers for meals and for the use of beds or bedding.

Subsistence from Forest Users.

It is against the policy of the Forest Service for its officers to accept in any unreasonable measure hospitality from Forest users. It is realized that many Forest users will not accept payment for subsistence and horse feed, but Forest officers should in all cases offer payment. They should avoid stopping at places where the owners will not accept payment, unless such avoidance will mean great inconvenience.

Forage.

When the estimated cost of forage and stabling of horses owned by field officers necessary to carry on their field duties exceeds $75 per annum in the case of permanent employees, or $6.25 per month in the case of temporary employees, the excess above the $75 per annum or the $6.25 per month will be paid by the Forest Service upon the certification of the supervisor (see Reg. G. A. 1). The form of such certification will be as follows:

> I hereby certify that this expenditure is to cover cost of forage in excess of the estimated amount of $75 per annum for the use of_____ an employee of the Forest Service.
>
> _____,
> *Supervisor.*

In order to make the payment of such expenses uniform and equitable the conditions surrounding the incurrence of such expenses for each employee shall be reported annually by the supervisor, and he should make careful estimates of the amount needed for this purpose for the next fiscal year. This report should show for each member of the Forest force: The number of horses owned and used in official work and initial cost, cost of equipment for horses, cost of feed and stabling, value of feed produced at ranger stations and cost of production, number of days the horses were used in field work, the number of days horses were not used, cost of shoeing horses, total cost of maintenance per year per horse.

From the suballotment for forage approved by the District Forester the supervisor will make allotments to the Forest officers for expenses as above, and the amount allotted to any Forest officer must not be exceeded during the fiscal year unless a sufficient reason is given and the allotment is increased by the supervisor to cover the necessary excess, provided the amount necessary to cover such increase can be secured through a readjustment of the suballotments to the Forest.

Supplies for Motor Vehicles.

When Forest officers or other employees own motor-driven vehicles, which they use in lieu of saddle horses or other animals in the performance of their official duties, the expense for gasoline, carbide, and oil will generally be reimbursed them. Repairs on such vehicles will not be paid by the Government.

Transfer of Household Effects.

Forest officers transferred from one official station to another for permanent duty may, under the written authority of the Forester, be allowed freight and drayage charges for the transfer of their household effects and of other personal property used by such officers when transferred, not exceeding in all 3,500 pounds. Horses will be transported at Government expense only when used in official work. Shipments by freight must be on Government bills of lading (see Methods of Shipment, p. 83), and each account must be accompanied by letter of instructions, and the certificate of the officer best qualified to make it that the property so shipped consists of the household goods of the officer transferred and is exclusively his property. (Act Mar. 4, 1911, Public No. 478, and Departmental Order No. 145.)

The Forest Badge.

The Forest officer is supplied with a badge, which serves as an evidence of his authority as an officer of the Forest Service. Every precaution must be taken against the loss of badges or their possession by persons not authorized to wear them. Broken or worn-out badges should be returned to the property clerk for repair or replacement.

When Not on Duty.

Reimbursement will not be made to employees for expenses incurred while on sick or annual leave, while on furlough, or leave of absence without pay. Telegrams regarding salary or leave of absence are considered private business, and the expense of neither the message sent nor the reply will be borne by the Government.

Summary of Comparative Cost of Living Expenses.

In order to obtain data for a just and equitable policy of reimbursing Forest officers for field expenses and also as a guide in making promotions and fixing rates of compensation, the comparative living costs of Forest officers should be ascertained. This should give the cost of food supplies, wearing apparel, board, lodging, and house rent, at headquarters and also in the field. An annual summary of this record should be included in the personnel report.

QUARTERS.

Properly located and equipped quarters are essential to the efficient transaction of business, the safeguarding of Government property, and the convenience of the public. Their selection should, however, be made with strict regard to economy.

District Offices.

The headquarters of the National Forest districts are located at places which offer the greatest advantages for the administration of the business of the Forest Service. Leases of district offices will be prepared in quadruplicate by the district assistant to the solicitor, on information furnished by the District Forester. After the District Forester has secured the execution of three copies by the lessor, the district assistant to the solicitor will pass upon the execution and if the copies are properly executed he will initial and return them to the District Forester, who will initial and send them to the Forester. After they have been executed by the Secretary they will be returned to the District Forester, who will send one executed copy to the lessor and two executed copies with the file copy to the district fiscal agent.

Supervisors' Offices.

The office of the Forest Supervisor of each National Forest will be located at the place which offers the greatest advantage for the transaction of business with Forest users, and the best facilities of transportation and communication with the Forest. In the event of the establishment of a new Forest, or in case the headquarters of a Forest are not well located, the District Forester will investigate the comparative advantages as headquarters of all the towns in the vicinity of the Forest, and will then submit definite recommendations to the Forester. The Forest Supervisor is responsible for the selection of suitable quarters for his office force and property. Whenever quarters become unsuitable the supervisor will submit recommendations to the District Forester, after investigation, for securing new quarters. Leases for supervisor's offices may be prepared by the supervisor under instructions from the District Forester.

They will be prepared in quintuplicate on the form approved by the solicitor. The service to be given by the lessor, including light, heat, telephone, and janitor service, should be described in detail in the lease. After three copies have been executed by the lessor, the five copies will be sent to the District Forester, who will refer them to the district assistant to the solicitor for approval as to form and execution. Such lease may, however, be prepared by the district assistant to the solicitor on information by the District Forester, whenever this procedure is more convenient. In either case, when the lease executed in triplicate by the lessor has been approved and initialed by the district assistant to the solicitor, it will be returned to the District Forester, who will initial and forward the three copies executed by the lessor to the Forester for execution. After these three copies have been executed by the Forester they will be returned to the District Forester, who will forward one executed copy to the lessor, two executed copies and one file copy to the district fiscal agent, and the remaining file copy to the supervisor.

Rangers' Offices, Storage, and Other Quarters.

When the amount or character of business on a ranger district, timber sale, or other important project requires office or storage facilities, and where the Service has no suitable quarters, the supervisor should report the situation, in detail, to the District Forester, with definite recommendations for the lease, or acquisition through other means, of suitable quarters. The procedure prescribed for preparing and forwarding leases for rangers' offices and other quarters on the Forests will be the same as for supervisor offices.

Supervisors and other officers should not close any arrangement for quarters until the necessary approval of their superior officer is obtained.

Lease of Land.

Owing to the fact that the department is not permitted to incur obligations for a period beyond the limit of the appropriation act, which is nearly always the fiscal year, land must not be leased for any purpose requiring the construction of buildings of a permanent character. The matter should be reported upon very fully to the Forester, and if approved by him, the procedure will be the same as for supervisors' offices.

Construction of Buildings.

When Government land is available, or in case land has been leased for supervisors' or rangers' offices, or for other purposes, the plans and cost of the buildings must be reported on fully to the District Forester, in accordance with the outline for the construction of buildings in the Improvement section of the Manual.

Ranger Stations.

Large areas within the National Forests are practically uninhabited, and entirely lack living accommodations. To remedy this situation Congress has provided for the construction of houses for Forest officers stationed on the Forests. It is clearly the intention of Congress that such dwellings shall be constructed only where they serve the actual needs of the Service, and not merely those of the ranger or other officer by whom they will be occupied. The construction or lease of dwellings solely for the personal needs of a Forest officer can be construed only as granting additional compensation, which can not be done unless specifically provided by law. Only where there is an undeniable need for them and when it is impracticable for the officer to rent or construct his own living quarters will houses be leased, rented, or constructed at Government expense. When the supervisor desires to construct or rent such quarters at Government expense he will report to the District Forester, in detail, the need for them and show that it is impracticable to provide them in any other way, and that they are not constructed or rented for the purpose of granting additional compensation to the officer who will occupy the quarters. The actual construction of such quarters will be handled in the manner outlined in the Improvement section of the Manual.

Quarters in Government Buildings.

When the quarters are desired in an existing Federal building the District Forester will prepare a letter for the signature of the Secretary of Agriculture, addressed to the Secretary of the Treasury, stating the number of rooms and amount of floor space required, the purposes for which the space is needed, and the amount paid as rental and other expenses, including light, heat, and janitor services, for other quarters occupied at the time. When the erection of a new

Federal building is proposed at any place where rented quarters are occupied by the Forest Service the District Forester will inform the Forester upon request of the amount of space needed in the new building and the amount of rental (including light, heat, and janitor service), if any, being paid for quarters. If it is contemplated to remove the offices to a town or city in which the new Federal building is to be built, the amount of rental paid at the present location should be given. The necessary memorandum to the Secretary of Agriculture will be prepared in the Washington office. If no space is needed in a new Federal building, this fact will be reported to the Forester.

Signs.

All quarters used by the Forest Service for the transaction of business with the public, including ranger stations, must be equipped with suitable signs. A sign that is approved for supervisors' offices is:

FOREST SERVICE
U. S. DEPARTMENT OF AGRICULTURE
OFFICE OF
OLYMPIC NATIONAL FOREST.

For a ranger station:

HUMPTULIPS RANGER STATION.

It is often advisable, also, to give the name of the ranger in some appropriate manner.

Property Notices.

All buildings owned by the Forest Service should have a property notice posted in a conspicuous place.

Use of Flag.

District, supervisors', and rangers' offices and headquarters should be provided with facilities for flying the United States flag, different sizes of which can be obtained on requisition. Even at temporary camps a flag calls to the attention of passers-by the presence of Forest officers; its use in such cases is recommended.

Maintenance of Quarters.

The Forest officer in immediate charge of buildings used by the Service will be held responsible for the order and repair in which the buildings and grounds are kept. When repairs or other work on quarters are needed, which can not be performed by the regular force, the necessary report and estimates should be submitted, in accordance with the instructions for permanent improvements. When necessary, expenses for janitor service for the care of National Forest offices may be incurred.

Equipment.

Standard furniture and equipment for quarters must be obtained on requisition from the property clerk. Furniture and equipment for supervisors' or rangers' quarters not furnished by the property clerk and costing more than $10 (except stoves, drafting tables, and blue-print apparatus) can not be purchased without the approval of the District Forester. Principles of economy should govern all Forest officers in expenditures for such equipment.

THE ADMINISTRATIVE PLAN.

THE FOREST FORCE.

Responsibility for supervising the use of the National Forests and for protecting and improving them rests primarily upon the supervisors. The personnel on a National Forest will be determined by the District Forester from annual estimates submitted by the supervisor.

District Rangers.

The routine work involved in the supervision of grazing, timber sale, free use, special use, and other contracts and permits, the direction of the protection and improvement plans, and the examination of and report on applications for any use of the Forest, including settlement and other claims, will be performed by rangers, who will be in entire charge of the work of such character within their ranger districts. The number of ranger districts into which a

National Forest should be divided will be determined by the supervisor, with the approval of the District Forester. The aim should be to so divide the Forest that in each district all of the regular work can be handled efficiently by one well-qualified ranger if granted the necessary temporary assistance. There is, of course, a practical limit to the area which can be handled by one officer, even with the most liberal assistance. So far experience has proven that ordinarily an area of approximately 200,000 acres represents this limit, though in exceptional cases the area may be greater. The area will, however, depend on the value of the Forest property, the extent of its use, and the availability of temporary assistance when most needed. Where such assistance can not be obtained, or where there is constant heavy work, it may become advisable to establish smaller districts. Where means of travel and communication are good, however, or where there is only a small volume of business, or where the fire hazard is low, districts larger than 200,000 acres may be established. The district rangers should have their headquarters at the nearest business center, or, if that is impracticable, permanent headquarters should be provided on the Forest.

Assistance for District Rangers.

When the work is too heavy or too complex to be handled by the district ranger alone, and yet does not make it advisable to divide the district, forest assistants, assistant rangers, guards, or other officers should be assigned to the district for such period as may be necessary.

Project Assistants.

Ordinarily project assistants will be under the direction of the district ranger, but in special cases, as in large timber sales, they may be given exclusive authority by the supervisor over a specific project, in which case they will have the standing of district rangers. Such assistants should, so far as possible, be kept on distinct lines of work.

Temporary employees who show special aptitude for specific lines of work should be kept on duty for the maximum period when this is practicable, because properly qualified assistants can secure the necessary training and experience only in the Service.

Data for Working Plans to be Obtained by Specially Qualified Assistants.

The work involved in making Forest surveys necessary to the preparation of definite plans of management for timber, grazing, settlement, special uses, administration, and protection will be performed by officers specially qualified, such as forest assistants, grazing examiners, lumbermen, members of the district office, or by the supervisor or deputy supervisor.

Preparation for Making Working Plans.

Plans, with estimates of cost for such surveys, will be made by the supervisor in accordance with the instructions given in the forest plans section of the Manual. The District Forester will determine those to be undertaken and have general direction over the details of execution and the personnel of the parties conducting the field and office work. Such parties will, however, while in the field be under the direction of the supervisor.

Allotment for Working Plan.

The allotment of money for the preparation of working plans will be made by the District Forester in accordance with the plan approved by the Forester. When a project has been determined upon the District Forester will allot to the supervisor the necessary money for its completion. Separate records should be kept of the cost of each project.

Nontechnical Assistance.

Work of a nontechnical character which can not be performed by the regular force will be performed by assistant forest rangers, forest guards, field assistants, and temporary laborers. Such assistants should be employed only for a particular purpose, and their salaries and expenses should be paid from a special allotment for that purpose. They are directly responsible to the officer directing their work. The instructions for each piece of work will include estimates for the expense of such assistance.

Clerical Assistants.

The forest clerk ordinarily will perform all the routine clerical duties of the supervisor's office. His salary will be charged to the general administra-

tion of the Forest. Other permanent or temporary clerks may be employed when the business of the office warrants, but unless the major portion of their time is actually occupied in routine duties their salaries will be charged to the particular line of work upon which they are engaged. The same policy will apply to draftsmen.

ANNUAL ALLOTMENT ESTIMATE.

On April 1 of each year a report will be submitted by the supervisor to the District Forester containing (A) a statement of the business of the Forest, (B) an outline of its organization, and (C) an estimate of the allotments required during the ensuing fiscal year.

The Business of the Forest.

(A) The business of the Forest should be discussed under four headings: *Administrative work, Protective work, Constructive work,* and *Receipts and expenditures.*

Under *administrative work* should be estimated for the following year, by ranger districts:

(1) The amount of timber to be estimated, sold, and cut, and the number of sales.

(2) The amount of timber to be cut under free use and the number of permits.

(3) The amount of stock to be grazed, by classes, and the number of permits.

(4) The number of settlement, special use or easement, and claims cases to be examined.

(5) Any other kinds of administrative work to be performed (i. e., work related to the immediate use of the Forest).

Under *protective work* should be given, by districts and classes, the value of the destructible resources of the Forest, the fire liability, and the fire hazard or risk.

The value of destructible resources consists of—

(1) Appraised value of merchantable timber.

(2) Expectation value of young growth, excluding areas where the method of cutting will not utilize young growth now established.

(3) Commercial value of forage.

(4) Value of land for watershed protection, including all timbered and brush areas. This valuation will necessarily be arbitrary and should be standardized in each district at fixed rates per acre for various types and localities. Such rates will be based upon the relative influence of various types of cover upon streamflow as far as determinable, but primarily upon the extent to which the streams are used for industrial purposes and the consequent need for protective cover.

The fire liability is the part of the foregoing values which are liable to be destroyed by fire.

The fire hazard to which each portion of the Forest is subject should be stated as concretely as possible, considering (1) sources of danger, (2) kind of fires liable to occur, and (3) ease or difficulty of control as determined by accessibility, protective equipment, available labor, etc.

The total value of the destructible resources indicates in concrete form the Forest property to be protected. On the fire liability and fire hazard, however, depend the intensity of the protective work, or insurance, required. Both together should be used by the supervisor and District Forester to check expenditures for protection on the Forest as a whole and on its component parts. The usefulness of this check is primarily as to the relative needs of different Forests and districts. Each District Forester should, therefore, standardize the bases for determining total values, liability, and hazards that they may be uniform for similar conditions on all Forests. (See section on Protection from fire.) Where the valuation of resources, fire liability, and fire hazard have been accurately determined in a forest plan, these items need not be further reported under Forest business unless revised data affecting the expenditures for protection are secured.

Under *constructive work* should be reported the work which should be done during the following fiscal year in—

(1) Construction and maintenance of improvements, listing projects separately, and showing their relation to the improvement plan of the Forest.

(2) Preparation of a forest plan, including timber reconnaissance not required for pending sale applications, grazing reconnaissance, and classification of agricultural lands.

(3) Reforestation, including seed collection, field seeding or planting, and maintenance of existing nurseries.

(4) Any other lines necessary as part of the permanent development of the Forest.

Under *receipts and expenditures* should be estimated the total revenues and expenditures for the current fiscal year, classified in accordance with the Manual of Accounting. The classification of expenditures should show, as far as practicable, the cost of administrative, protective, and constructive work separately, and of each of the major lines of administrative and constructive work.

Outline of the Forest Organization.

(B) The organization of the Forest will be shown by—

(1) A map on a half-inch scale showing ranger districts and headquarters; the location of the larger timber sales; free use areas; important special uses; and other administrative projects; the more essential features of the protective organization; and the location of major permanent improvements and areas where reconnaissance or land classification is proposed.

(2) A statement of the number and areas of ranger districts, with the cost, salary, and expenses of the permanent force in each; the number and cost of temporary assistants required on each class of administrative work, on protective work, and on constructive work respectively; the executive force at the Forest headquarters and its annual cost; and the clerical force, permanent and temporary, required, together with its cost.

Estimate of Allotment.

(C) The estimate of allotments for the ensuing fiscal year, based upon the statements of Forest business and organization, should forecast the cost of each line of work during the next year by classes of expenditures as prescribed in the Manual of Accounting. The cost of administrative, protective, and constructive work should be indicated separately as far as the organization of the force makes this possible.

ANNUAL APPROPRIATION ESTIMATES.

Estimates for appropriations for the fiscal year following the next ensuing fiscal year will be submitted on April 1 by the supervisor to the District Forester. These estimates will be submitted by lines of work and classes of expenditures in accordance with the Manual of Accounting. They will be based upon the allotment estimates for the ensuing year, with such changes as a forecast of the business and most efficient organization of the Forest make advisable. To secure uniformity, the District Foresters will issue detailed instructions on the preparation of these estimates.

On May 1 the District Forester will submit complete estimates for the district to the Forester.

CONTROL OF THE FOREST FORCE.

POLICY.

Qualifications of Forest Officers.

To maintain the high standards rightfully demanded of its servants by the public, every member of the Forest Service, besides having knowledge and experience, must be honest, courteous, and industrious.

Relations Between Officers.

The desired standard of efficiency and service can not be obtained by any hard and fast rules such as control military organizations. Such rules would, in fact, prove a handicap. A control based on justice and upon an understanding of the character and experience of the men and upon dependence on their good sense and loyalty has been the governing policy of the Forest Service from the beginning.

While Forest officers must exercise, when necessary, the authority which their positions carry, they should always be mindful of their responsibility rather than of their right to give commands. Instructions and not orders should be issued by superior to subordinate officers. A dictatorial manner or a lack of courtesy is a demonstration of failure to meet the standards of the Service.

A Forest officer should exercise the most unfailing loyalty, patience, tact, and comradeship, and the most persistent and conscientious effort to cooperate with and to assist his fellow officers.

Selection.

In selecting men from the civil service registers, pains should be taken to look into their character and reputation, so that unfit men may be prevented from entering the Service. If a person on the eligible list is found to be unfit his name should be passed, and the facts reported promptly to the District Forester.

The experience and training necessary to pass the civil service examination for assistant forest ranger can be obtained in but few occupations outside of the Service, and usually eligibles on the register are persons who have been employed in some capacity on the Forests. In selecting forest guards and other temporary employees the supervisor should, therefore, consider their natural aptitude and encourage promising appointees to perfect themselves in all branches of Forest work.

Assignment.

When making personnel assignments the supervisor should carefully consider the fitness of the man for the particular project. This precaution not only obtains better results but is more just to the man. No one should be assigned to work which he can not perform satisfactorily. Fully qualified men can be obtained, however, only rarely, and, in order to insure the greatest possible degree of success, the officer in charge should see that inexperienced men are furnished with the most explicit instructions. These instructions should cover not only the methods of doing the work, but should include suggestions as to proper equipment and any other information which may prove of value.

Authority to Assign or Transfer.

The supervisor has authority to assign or transfer men on the Forest of which he is in charge, but transfers to other Forests, after being arranged for tentatively, must be approved by the District Forester, and must be reported to the Forester when the transfer is made. The district foresters may arrange for the transfer of rangers and clerks between districts, but if such transfers involve changes in district allotments the District Forester will at once recommend the necessary increase or decrease in the district allotment. The assignment or transfer of executive officers such as assistant district foresters or supervisors, may be arranged for tentatively by the district foresters, but must be approved by the Forester.

Supervision.

To judge a man's efficiency, it is necessary that the officer in charge shall have an intimate knowledge of his character, mentality, and ambitions. This can be obtained only by actual contact, and advantage should be taken of every opportunity to get into personal touch with the man and to watch his work in the field. Some men develop rapidly, others slowly, and this fact should be taken into consideration when determining an employee's present and possible future value to the Service.

Officers should not hesitate to extend praise for good work; in fact, it can almost always be given without danger. At the same time, errors, negligence, or lack of industry should be pointed out immediately they are discovered.

Probational Appointments.

The civil service rules provide for a period of probation, during which time appointees from the register may be separated for unsatisfactory services without the formalities required to terminate absolute appointments.

The probational period is six months, except for forest assistants and assistant forest rangers. For these two positions the period is one year. During the probational period the officer under whom the appointee is working will determine his ability to perform the duties of his position. The conclusion should not be hastily reached that the probationer is inefficient or incapable; but when the officer in charge is fully satisfied that the appointee is inefficient or incapable and that the public service will not be benefited by his retention, the facts should be reported to the District Forester in ample time to permit the initiation of the action required under the civil service rules. Retention after the expiration of the probational period constitutes an absolute appointment.

Salaries and Promotions.

The rates of compensation of Forest officers on the miscellaneous roll are fixed by the Secretary. Statutory positions are established by act of Con-

gress. Promotions will be based strictly on merit, length of service, and the possession of qualifications required for each position. The district foresters will issue instructions annually to the supervisors, outlining the policy which must be followed in fixing the compensation of forest guards and other temporary employees. Such instructions will be based on reports from the supervisors giving local rates of compensation from private employers, and the relative cost of living. They should recommend the rates of compensation which the Service should offer to obtain the right kind of men.

Outside Employment.

All employees are expected to give their entire time to the Service. In exceptional cases permission to engage in outside employment may be obtained from the Secretary of Agriculture. When such permission is desired, the member concerned should address his request to the Secretary of Agriculture, in accordance with section 6 of the Fiscal Regulations, giving a statement of the kind of work contemplated, and that it will not hamper or interfere with his work for the department. If his immediate superior approves the request, he will initial and forward it to the Secretary through the proper channels.

Leave of Absence.

Members of the Forest Service on duty outside of Washington may be granted leave of absence with pay for a period of not to exceed 15 days annually, or at the rate of 1¼ days per month. In case of sickness there will be granted an additional leave of absence with pay of 15 days per year, or at the rate of 1¼ days per month.

It should be understood by all Forest officers that the granting of annual leave of absence is entirely within the discretion of their superior officers, and that in case of urgent work, or for other good reasons, it may be impracticable to grant them the whole or a part of the annual leave.

Leave of absence without pay for a period not to exceed 30 days may be granted by the supervisor to Forest officers, at their own request, in order to attend to private business or for other good reasons. Applications for leave of absence without pay for periods longer than 30 days will be referred with appropriate recommendations to the District Forester. The Fiscal Regulations contain full instructions relative to the methods of calculating leave of absence.

Furlough.

Forest officers are furloughed without pay at the instance of their superior officer, when, on account of lack of funds or cessation of work, it becomes inadvisable to keep them on the pay roll. Officers on furlough have the same rights under the civil service rules and regulations as have officers on active duty, and when funds again become available or work is resumed, they must be given preference. In case they do not desire to be restored to active duty, they should either resign or apply for leave without pay.

Personnel Reports.

The supervisor will submit on May 1 an efficiency report on each member of his force in duplicate on the regular departmental form, and this report will include his annual promotion recommendations. No other personnel report will be made by the supervisor, except in cases which require special attention or action, or when called upon by the District Forester.

Diaries.

Members of the district office, supervisors, and deputy supervisors will keep a diary when traveling in the field. Forest clerks will keep a diary of the daily proceedings in the office of the supervisor. Visits from permittees and others and the nature of the business transacted should be noted. All officers on the Forests will record every day's service in a diary to be kept in the regular field notebook, which will be submitted to the supervisor on request. When it is considered desirable by either the District Forester or the supervisor, the Forest force may be required to accompany the monthly service report (Form 26) with a brief summary of the dairy for the month.

Supervisors will bear in mind that in no case will the examination of rangers' diaries replace field supervision. The diary is a record and not a measure of efficiency, and no criticism of Forest officers' actions will be based upon it unless substantiated by investigation.

Rangers' diaries should contain a concise statement of the work done during the day, including patrol, fire, scaling, cruising, surveying, investigations, reports, range examinations, improvements, etc. The particular project should be named in each case, as well as the exact nature of the work. The names of people with whom the Forest business was transacted or discussed should be given and the nature of the business stated. Topics such as general timber estimates, future work to be done, condition of range or watershed, possible routes for trails or telephone lines, sites for stations, bridges, plantations, free-use areas, watering places for stock, topography, and location of corners should be entered.

Diaries of supervisors and deputy supervisors will be examined and initialed by the proper administrative officers who visit the Forest. The diaries of other members of the Forest force will be examined periodically and initialed by the supervisor or deputy supervisor and also by members of the district office, above the rank of chief of section, visiting the Forest. All diaries of Forest officers will constitute a part of the permanent records of the Forest, and when a Forest officer leaves the Service his diary will be turned in to the supervisor. Rangers' and guards' diaries will be filed in the headquarters of the district in which they have served.

Record of Distribution of Service.

The certificates of service (Form 26) will be made monthly to the supervisor by all officers on his Forest. Those assigned to a Forest from the district office will submit a duplicate Form 26 for the information of the District Forester. Supervisors will make such arrangements as are necessary to insure the receipt at their offices of the Forms 26 not later than the 5th day of each month.

Records of Conferences.

In addition to the diary record of business transacted or discussed a record in memorandum form will be made of every important conference relating to Forest work. The memorandum will show when and where the conference was held, who was present, what matters were discussed, what statements were made, and what conclusions were reached. It will bear the proper filing designation and will be signed by the officer making the memorandum and be filed with the other papers in the case.

Development of Employees.

The members of the regular force on the Forests are not specialists, but must be proficient in all lines of work. Experience is required to develop this proficiency, hence supervisors should give their officers opportunity to obtain wide training and experience, and should make assignments with this end in view.

Instructional Assignments.

During the winter, when many rangers are not fully occupied with routine business, the supervisor should assign to them duties of such character as improve the quality of their work. The ability to draw good maps is of great importance; at the same time it is an ability which many officers do not possess. Suitable instructions should be issued on this subject, and compliance with them made a part of the officer's duties. Likewise, a course of instruction in the use of the typewriter will prove of value. Many other subjects, such as surveying and estimating, could well be covered by such instructions, and if carried out would result in greatly increased efficiency.

Ranger Meetings.

To give Forest officers the benefit of one another's experience, to keep them in touch with the entire work of the Forest, and to promote esprit de corps, an annual meeting should be held of the entire force on each Forest. When a supervisor desires to hold such a meeting he will submit to the District Forester for approval or revision a detailed statement which will include the place of meeting, the program, the date and period, and the cost in traveling expenses, together with some statement as to whether the meeting will interfere with the work on the Forest.

When feasible, joint meetings of the force on adjoining Forests should be arranged, and the District Forester should, if possible, assign members of his office to attend every ranger meeting.

Rangers' Reading Courses.

The District Foresters should prepare outlines of courses of reading for the rangers, which will cover the various subjects and contain references to the available books. This will insure an intelligent and systematic use of the books in the Forest libraries. These outlines may be supplemented by lists of questions to be answered by the ranger students, after the reading course is completed. The details of the plan and its execution will be left, however, to the District Foresters.

Attendance of Forest Officers at Public Meetings.

A forest supervisor or his representative may, when necessary, attend meetings which directly affect the administration of the National Forest of which he is in charge. One member of the district office may also be authorized by the District Forester to attend such meetings. When a supervisor is invited to attend meetings of this kind he will inform the District Forester and make recommendations as to the advisability of the attendance of a member from the district office. In case it is desirable for a Forest officer to attend meetings other than those here specified, the circumstances should be reported to the Forester through the proper channels. (See p. 63.)

Temporary Details to Washington Office.

To keep close touch between officers in Washington and in the districts, the Forester will call District Foresters and assistant district foresters into Washington for details of approximately one month. These details may be to aid in the general administration of the Service, for conference on important points of policy, or for special work.

To prevent serious interference with the plans in the districts, the District Foresters will be called upon for suggestions and recommendations before any detail is made from a district office to Washington.

Temporary Details to the District Offices.

The District Forester will detail supervisors, deputy supervisors, forest assistants, and, in cases of special efficiency, forest rangers, to assist as needed in the district offices of Operation, Lands, Silviculture, Grazing, and Products. The total number of such details to any district office for any one year will be determined by the District Forester. Only in cases of emergency will the period of such detail exceed, for any one man, six weeks in a single year.

Amendments to Forester's Authorization.

Whenever a member of the field force is detailed to a district office, or to the Washington office, for a period longer than six weeks, an amendment to the Forester's letter of authorization will be requested of the Secretary, in the following form:

> The Secretary of Agriculture:
>
> Sir: I have the honor to request that Letter of Authorization No. 537 to the Forester, dated July 1, 1909, be amended to permit ———, whose official station is ———, to be reimbursed for his actual expenses incurred for subsistence while detailed to the office of the Forest Service at ———, for the period not to exceed ——— days, the expenses for subsistence not to exceed an average of $—— per day.
>
> Very respectfully, ——— ———,
>
> *Forester.*

The maximum allowance for subsistence (meals and lodging only) during a temporary detail of more than 15 days should not exceed an average of $3 per day for the whole period.

Efficiency.

To familiarize the rangers with the general routinue of Forest business and with matters outside of their districts, each supervisor will arrange for temporary office details from his ranger force. Such details must not interfere with field work or occasion an increase in the force, and should not exceed one month in duration. An important result of the detail will be the training and development of the ranger. As a rule, office work outside the duties of the supervisor and his deputy can be done better and more cheaply by clerical help.

Misconduct.

Conduct detrimental to the work of the Forest Service, or subversive of discipline, such as disobedience of orders, negligence, insubordination, dishonesty,

inefficiency, drunkenness, disreputability, or a prejudicial personal interest in the exploitation of the resources of the Forest, renders the offending officer subject to disciplinary measures. Members in doubt as to the application of the rules to their private actions should seek the advice of their official superiors.

Rules for Conduct.

The following specific rules for conduct have been adopted:

(1) No member of the Forest Service shall, under any circumstances, file or initiate a claim, directly or indirectly, under any of the public-land laws, to land within the limits of a National Forest. A member who has secured a claim under any of the public-land laws to such land, before its inclusion within a National Forest or before his appointment as a Forest officer, will be allowed to perfect his title, but he may be compelled to choose between his claim and his position should his duties make it impossible for him to comply with the residence or improvement requirements.

(2) A member of the Forest Service may acquire land not included within a National Forest, under any of the Federal or State land laws, or have an interest in any association, partnership, or company formed with a view to acquiring such land, unless such action might prejudice his standing as a Forest officer, influence his official action, or tend to bring criticism upon the Forest Service.

(3) A member of the Forest Service may purchase private land within or near a National Forest, unless such action might prejudice his standing as a Forest officer, influence his official action, or tend to bring criticism upon the Forest Service.

(4) No member of the Forest Service shall, as principal, partner, or agent, speculate or be commercially interested in timber or other forest products, or in live stock, or in any ownership or lease of any timberland, or in any lumbering contract or operation, whether on the National Forests or elsewhere, when such action will prejudice his standing, influence his official action, or tend to bring criticism upon the Forest Service.

(5) No member of the Forest Service shall, as principal partner or agent, be interested in any enterprise which profits by the use of any National Forest on which he is employed or by any investigation or other work in which he may be engaged, except as otherwise provided herein.

(6) No member of the Forest Service shall, directly or indirectly, engage in or profit by private business transactions with or receive gifts from a National Forest user or others with whom he has official relations which might influence his official action or tend to expose the Forest Service to criticism.

(7) It is improper for any member of the Forest Service to grant any privilege or permit by which he or any member of his family will profit, directly or indirectly. Such permits may be issued only by his official superior.

(8) Whenever in granting a permit or in making any decision or recommendation the good faith of a member of the Forest Service might be questioned, on the ground that the action was influenced by personal friendship, family relationship, or business interests, the Forest officer may refer the case to his official superior when in his judgment this course is advisable in order to protect himself and the Service.

(9) No member of the Forest Service shall give or use information acquired by means of his official position to advance the interests of himself, his family, his business associates, or his personal friends over those of other persons.

(10) No member of the Forest Service shall engage in any speculation, mercantile transaction, or other activity of a character to engross his attention or to divert it from his public duty.

(11) A Forest officer is a representative of the National Government, and as such his acts as a private individual are particularly open to criticism and may reflect on the Service. Consequently he must set and hold to a high standard of personal conduct and integrity that will safeguard the Service against criticism and embarrassment.

(12) The orders prohibiting political activity, which follow, will be strictly enforced.

POLITICAL ACTIVITY.—Rule 1, section 1, of the civil-service rules reads as follows:

> No person in the executive civil service shall use his official authority or influence for the purpose of interfering with an election or affecting the result thereof. Persons who by the provisions of these rules are in the competitive classified service, while retaining the right to vote as

they please and to express privately their opinions on all political subjects, shall take no active part in political management or in political campaigns.

The first sentence of the rule applies to every person in the executive civil service, irrrespective of the method of his appointment. The second sentence of the rule applies to all persons holding positions in the competitive classified service, whether the appointment be permanent or temporary in character, and by departmental action has also generally been made applicable to unclassified laborers.

The following forms of activity have been held to be forbidden by this provision:

Service on political committees; service as delegates to State, county, or district conventions of a political party, although it was understood that the employees were not "to take or use any political activity in going to these conventions or otherwise violate the civil-service rules"; service as officer of a political club, as chairman of a political meeting, or as secretary of an antisaloon league; continued political activity and leadership; activity at the polls on election day; the publication or editing of a newspaper in the interests of a political party; the publication of political articles bearing on qualifications of different candidates; the distribution of political literature; holding office in a club which takes an active part in political campaigns or management; making speeches before political meetings or clubs; activity in local-option campaigns; circulation of petitions having a political object, of petitions proposing amendments to municipal charter, of petitions favoring candidates for municipal offices, and of local-option petitions; candidacy for or holding of elective office; accepting nomination for political office with the intention of resigning from the competitive service if elected; recommendation by clerks and carriers of a person to be postmaster; service as a commissioner of election in a community where it was notorious that a commissioner of election must be an active politician; service as inspector of election, ballot clerk, ballot inspector, judge of election, or member of election board; or generally any form of activity in political management or political campaigns, though not specifically mentioned above.

Inasmuch as the issuance of a certificate for reinstatement is discretionary with the Civil Service Commission, no certificate will be issued in any case where the party applying for reinstatement has previously resigned with a view of running for office, or with a view of indulging in a degree of political activity which would be prohibited if he had remained in the service, and who afterwards, having failed in his candidacy or having indulged in the contemplated activity, seeks reinstatement.

Political Assessments or Contributions.—The civil-service act (22 Stat., 404) provides that "no person in the public service is for that reason under any obligations to contribute to any political fund, or to render any political service, and * * * he will not be removed or otherwise prejudiced for refusing to do so." Section 118 of the Criminal Code provides that no Federal officer or employee shall, directly or indirectly, solicit or receive, or be in any manner concerned in soliciting or receiving, any political assessment, subscription, or contribution from any other Federal officer or employee. Section 120 of the Criminal Code prohibits the discharge, promotion, or degrading of any officer or employee for giving or failing to make any political contribution. Section 121 of the Criminal Code prohibits any Federal officer or employee from making any such political contribution to another Federal officer or employee, and section 119 prohibits the solicitation or receipt of any political contribution in any room or building occupied in the discharge of official duties by any officer or employee of the United States, or on other Federal premises by any person whatsoever, whether in the public service or not. In connection with this latter provision, the United States Supreme Court has held that a solicitation by letter or circular addressed and delivered by mail or otherwise to an officer or employee of the United States at the office or building in which he is employed in the discharge of his official duties is a solicitation within the meaning of the law, the solicitation taking place where the letter was received. Section 122 of the Criminal Code provides that whoever shall

violate any provision of the four sections above mentioned shall be fined not more than $5,000, or imprisoned not more than three years, or both.

It is the duty of the Civil Service Commission to see that the civil-service act and rules and the above-mentioned sections of the Criminal Code, which were originally enacted as a part of the civil-service act, are strictly enforced, and it will employ every legitimate and available means to secure the prosecution and punishment of persons who may violate them. The commission requests any persons having knowledge of any such violation to lay the facts before it, that it may at once take action thereon.

(13) In accordance with an Executive order issued April 8, 1912, petitions and other communications regarding public business addressed to Congress, or either House, or any committee or Member thereof, by officers or employees in the civil service of the United States shall be transmitted through the heads of their respective departments or offices, who shall forward them without delay, with such comment as they may deem requisite in the public interest. Officers and employees are strictly prohibited from attempting, either directly or indirectly, to secure legislation or to influence pending legislation, except in the manner above prescribed.

Patents.

Employees of the Department of Agriculture are prohibited from patenting for their exclusive benefit any device, process, or discovery connected with the work of the department, provided such device, process, or discovery is made at the expense of Government time or Government money, or both. When an employee makes any new and useful discovery or invention in the course of his employment he should make application for a patent through the district assistant to the solicitor.

The patent will be taken out in the name of the inventor without any expense to him, and will allow to any citizen of the United States the use of the patented article or process without payment of a royalty.

Disciplinary Measures.

Action in cases of inefficiency or misconduct are necessary in every organization. In taking action, however, it should always be kept in mind that the object is the improvement of the Service and not the infliction of punishment or a means of satisfaction for any error, injury, or inefficiency on the part of a subordinate. Generally, severe measures have no greater influence than light ones, and the policy should be to administer only such disciplinary measures as will protect and maintain the standards of the Service.

It should also be remembered that disciplinary measures will never equal in effectiveness close inspection to prevent misconduct or inefficiency, and that a warning or reprimand administered promptly will, in most cases, render more severe measures unnecessary.

Transfers.

When the conduct of a Forest officer has rendered it difficult or impossible for him to give that service which his superior has a right to demand, but which will not destroy his value to the Service in another position or on another Forest, he may be transferred. Forest officers may also be transferred at their own request because of ill health or for other personal reasons.

Suspensions.

In case of particularly flagrant misconduct by a member of the Forest force the supervisor may suspend or relieve him from duty immediately, at the same time reporting the circumstances in detail to the District Forester, with definite recommendations for action. Ordinarily, however, when occasion for suspension arises, the supervisor should report the facts to the District Forester, recommending a suspension pending further investigation or the final disposition of the case.

Demotions.

In general, an officer will be demoted only as the result of his inability to perform properly the duties of his position. In some cases, however, demotion is administered as a severe penalty for gross negligence or serious misconduct of an officer in a responsible position, where the officer's action does not destroy his usefulness to the Service.

Reprimands.

A formal written criticism or reprimand should be made for misconduct or negligence which is more reprehensible than that which can be orally reprimanded, yet not sufficiently censurable to demand a more severe form of disciplinary action.

Removal.

Removal is the extreme administrative penalty. Removal for misconduct which involves moral integrity constitutes a bar to any future employment in the classified civil service of the Government. Often it is a serious barrier to employment in private life, and for this reason should be resorted to only in the most flagrant cases. Recommendations for removal should be supported by convincing evidence and a complete history of all the circumstances which led up to it.

Enforced Resignation.

When for misconduct or inefficiency an officer has terminated his usefulness to the Forest Service, and yet does not merit removal, his resignation should be requested. If the officer refuses to resign, removal must be recommended. In making request for resignation, which should, if possible, be verbal, the superior officer should make it plain that in case the delinquent refuses to resign he must accept full responsibility for the consequences of a removal.

Appeals.

An appeal from any disciplinary measure administered to an officer may be taken by him to the District Forester, to the Forester, and to the Secretary (Reg. G. A., 4). Letters of appeal must be forwarded through the hands of the immediate superior of the officer making the appeal.

PROCEDURE.

Civil-Service Eligibles.

When appointments are required from any civil-service register, except for assistant forest ranger, the certification of eligibles will be secured from the Civil Service Commission by the District Forester through the district fiscal agent. Certificates which list all eligibles for assistant forest ranger are issued by the commission as soon as the examination papers are graded. A separate certificate is issued for each National Forest headquarters at which examination was held, and this certificate lists in the order of their ratings the eligibles who are legal residents of the State or States in which the National Forest is situated, and who took the examination at that Forest headquarters. Whenever any Forest certificate contains less than three names the selecting officer may be authorized by the District Forester to make a group of three by drawing the highest name or names from the certificate of any other Forest within the same State. In addition to the certificates for the individual Forests within the State a supplemental certificate is issued for each State, and this gives the names of all the nonresident eligibles who took the examination within the State for which the certificate is issued. This constitutes an auxiliary register, and selection will be made from it only after all the eligibles on the individual Forest certificates have been considered in accordance with the civil-service rules. The procedure in handling certificates of eligibles, for either permanent or temporary employment, as given on pages 20 to 25 of "Regulations Governing Appointments and Other Changes Affecting the Personnel in the Field Service of the Department of Agriculture," issued January 25, 1912, must be followed strictly.

When Names on Register May be Passed.

If an eligible refuses to accept three offers of employment, either on the same or on different Forests, he need not be considered further. In like manner, when an eligible has been considered in three separate groups of three, as required by the regulation, and not selected, further consideration of his name may be omitted. When it has come to the knowledge of the Forest Service since the date of the examination that an eligible was dismissed from the public service within one year next preceding the date of his application; that he is physically or mentally unfit for the position for which he applies; that he has been guilty of criminal, infamous, dishonest, immoral, or notoriously disgraceful conduct; that he intentionally made a false statement in any material fact or practiced any deception or fraud in securing examination, registration, or certification; or that he habitually uses intoxicating beverages to excess, his

name may be passed over, but in reporting on the certificate the facts substantiating the objection must be given. Preliminary notice, however, of cases of refusal to accept appointment and of elimination for unfitness will be given at once to the Forester.

Rangers Appointed for Administrative Work Only.

Recommendations for the appointment of rangers from the civil-service register will be made only when the work to be done is administrative in character, or is to continue more than six months in the year.

Ranger Eligibles for Protective Work Appointed Guards.

Men required for periods of six months or less, on protective work only, should be recommended for appointment as forest guards, whether on the eligible list or not. In recommending the appointment of guards, however, supervisors are not required to select men from the ranger register unless such men are *locally* available.

Requests for Certification.

Except for assistant forest rangers the certification of eligibles requires some time, and supervisors should anticipate their needs and request certification at least a month before the vacancy is expected to occur.

Procedure for Appointments, Changes of Grade or Assignment, and Separations.

When a supervisor wishes to recommend an appointment, promotion, reduction, acceptance of resignation, furlough, restoration from furlough, leave of absence without pay, restoration from leave of absence without pay, suspension, removal, separation, or transfer, he will submit his recommendations as memorandums to the District Forester, giving name of appointee, State of legal residence, designation, salary, roll (statutory or miscellaneous), and date effective, and, in the case of temporary employees, the period of employment. The memorandum should, whenever possible, be prepared and forwarded some time in advance of the date upon which the action should be effective. If, however, it is impracticable to forward it before the action becomes effective, it should be forwarded as soon as possible after the exact date is known. In memorandums calling for promotion, reduction, suspension, removal, and transfer the date effective should be set sufficiently far ahead to secure the Secretary's action before it becomes effective. Such memorandums, when initialed to show approval by the District Forester, will be forwarded to the district fiscal agent as the basis for recommendations to the Secretary, for the signature of the Acting Forester. The carbon of the letter of recommendation to the Secretary will be initialed by the District Forester and the district fiscal agent.

Administrative Letters.

Recommendations by the supervisor in cases involving promotion, reduction, suspension, removal, and transfer should be made in administrative letters giving all the facts.

Officers to Be Notified in Advance of Contemplated Action.

Any action toward separation, furlough, requested resignation, or removal, should be taken up in advance with the officer affected, to give him ample time to arrange his personal affairs and seek employment elsewhere.

Removals and Reductions.

Removals or reductions may be made for any cause which will promote the efficiency of the Service, but like penalties must be imposed for like offenses, and no discrimination for political or religious reasons is permitted. A person in the competitive service whose removal is proposed must be furnished with a statement of reasons and be allowed sufficient time for answering such reasons in writing; but no examination of witnesses nor any trial or hearing is required except in the discretion of the Secretary of Agriculture. The recommendation for removal or reduction must be accompanied by all the supporting evidence and correspondence, in duplicate, except when a reduction in grade or compensation is made for administrative reasons and not because of misconduct or delinquency. In such case the employee must be furnished in advance with a statement of the reasons for the reduction. Copies of this statement, in duplicate, should accompany the recommendation, which should contain a concise statement of the reasons. If removal during the probational

period or termination of appointment at the end of this period is proposed, the probationer must be notified in writing that his conduct or capacity is not satisfactory, with a full statement of reasons, and this notice will terminate his services. Copies of this statement, in duplicate, should accompany the recommendation, which should contain a concise statement of the reasons.

Time Limit to Suspension Pending Disciplinary Action.

Pending action looking to removal or reduction for misconduct or delinquency, a member of the Service may be suspended or temporarily removed for a period not to exceed 90 days, but the reasons for such suspension or temporary removal must be furnished the member and must be given in the recommendation to the Secretary of Agriculture. Copies of the statement of reasons, in duplicate, should accompany the recommendation. If the member is charged with Government property, approval of his salary and reimbursement vouchers should be withheld until the property accountability has been satisfactorily settled.

Letters Recommending Personnel Changes.

Letters of recommendation to the Secretary of Agriculture, for the signature of the Acting Forester, should be prepared with black record ribbon, with three carbon copies. The original recommendation and two carbon copies will be sent to Washington, and the third carbon held by the district fiscal agent in a waiting file. If any change is made in the recommendation as submitted, a carbon copy showing the change will be sent to the district fiscal agent. If, however, the letter is signed as submitted, a carbon copy stamped with the signature of the Acting Forester will be returned to the district fiscal agent for substitution for the waiting-file carbon, which will then be destroyed.

Recommendations should always be written on letter paper headed: "United States Department of Agriculture, Forest Service." In every case these letters should be prepared without date.

Care in Giving Names.

Names must be correctly given in recommendations, and not nicknames or slang names. Care must be taken to give the name in a recommendation for appointment exactly as it appears on the certificate of the Civil Service Commission. In the case of guards, the first name, middle initial or initials, and surname in full should be given.

COMPENSATION FOR INJURIES.

By an act of Congress approved March 11, 1912, the provisions of the act of May 30, 1908, which grants to certain classes of employees of the Government engaged in hazardous employment the right to receive from it compensation for injuries received in the course of their employment, were extended to include the Forest Service. The compensation which can be given under this act is limited to one year's salary payable to men incapacitated for that period, or to dependent relatives in case of death which results from such injuries before the expiration of the year; when the complete disability continues for a period less than one year, it is limited to such period at the yearly rate.

The Department of Commerce and Labor, which has charge of the administration of this statute, has issued complete instructions governing the procedure to be followed by employees desiring to take advantage of its provisions. These instructions are furnished to every supervisor.

CHANGES IN REGULATIONS AND INSTRUCTIONS.

Issued from Washington.

Notice of changes in the regulations or instructions will be published as amendments to the National Forest Manual.

As it becomes necessary to modify and add to the National Forest Manual, successive changes or additions will be printed separately, as amendments, on pages of identical size and type with the Manual. Each amendment to the regulations will be given a serial number, beginning with "Amendment No. 1, Regulations," and each amendment to the instructions will be give a serial number beginning with "Amendment No. 101, Instructions." In addition to the serial number, each amendment will indicate the part and page of the Manual to which it relates.

Each Forest officer whose duties require him to be familiar with the entire Manual will be expected to keep one set of the Manual, to be plainly marked "File Copy," in which must be entered marginally, on the page designated by each amendment, the serial numbers of the amendments as they are issued. He will also keep a file of all amendments in their serial order. When a new amendment is received its number should first be entered on the margin of the designated page of the file copy, and the amendment should then be filed, care being taken to see that the amendment of the immediately preceding serial number is in the file. If the immediately preceding amendment is not found in the file the Forest officer should at once take the steps necessary to obtain it. File copies of the National Forest Manual and files of the amendments will be subject to inspection to see that they are kept up.

When a new ranger is appointed he will be furnished with a set of the National Forest Manual and a set of all amendments issued to date, and will be expected to make the necessary annotations of the set to form his file copy.

Issued from District Office.

When a District Forester finds it necessary to issue instructions (not simply explanatory) under existing regulations to all officers on National Forests in his district, he will, when practicable, submit them to the Forester for publication as a change in the National Forest Manual. When the delay would interfere with the object of the instructions, or when their scope is limited to district business, or if they are simply explanatory, the District Forester will issue a circular letter to all supervisors in his district. Copies will be sent to the Forester. Copies will be sent also to each District Forester, except when the character of the instructions is strictly routine or when the letter is issued as the result of general instructions from the Forester.

OFFICIAL CORRESPONDENCE.

CLASSIFICATION.

Washington Office.

The correspondence of the Washington office will comprise departmental, Service, branch, and office correspondence.

Departmental Correspondence.

The following classes of correspondence will be prepared for the signature of the Secretary of Agriculture: Letters to the heads of other executive departments, and answers to letters referred to the Forester by the chief clerk of the department with instructions to prepare answers for the signature of the Secretary.

Service Correspondence.

The following classes of correspondence will be signed by the Forester: Letters to the Secretary of Agriculture (except recommendations for appointments, changes in salary status of the personnel, and the certification of civil-service eligibles, which may be signed by the Associate Forester as Acting Forester); letters to the chiefs of other bureaus in the Department of Agriculture; letters involving matters of policy affecting the Service as a whole; letters which, in the judgment of the assistant foresters, are of sufficient importance to require the signature of the Forester; and letters making allotments to branches and districts.

Branch Correspondence.

The following classes of correspondence will be signed by the Assistant Foresters: Instructions to District Foresters on branch matters; letters dealing with matters of policy affecting the branch but not the Service as a whole; letters involving more than one office of the branch.

Office Correspondence.

Chiefs of office will sign correspondence not included under departmental, Service, or branch correspondence.

District Office.

The correspondence of district offices will comprise departmental, Service, district, and office correspondence.

Departmental and Service Correspondence.

Departmental and Service correspondence will comprise the classes specified under these headings for the Washington office.

Whenever possible, the District Forester will submit letters for the signature of the Secretary or the Forester and not merely furnish statements to serve as the basis for the preparation of letters in Washington. All papers necessary for a complete understanding of the case will accompany such letters.

District Correspondence.

The following classes of correspondence will be signed by the District Forester: Letters to the Forester; letters to other District Foresters; letters materially affecting the standing of any Forest officer; letters of allotment and authorization; letters dealing with matters affecting the district as a whole; and circular letters to supervisors necessitating additions to the field force. When dealing entirely with one line of work, these may be signed by the assistant district forester with the approval of the District Forester. District Foresters will sign letters to officers of the executive departments who are not in Washington, provided such correspondence does not deal with matters of general policy, when to correspond through Washington would seriously delay action.

Requests for status may be signed by the assistant district forester in charge of the office requiring it as acting district forester.

The assistant district foresters in charge of offices will sign correspondence handled in their respective offices not included above.

Supply Depot and Property Audit Correspondence.

Correspondence relating to requisitions for and shipments of supplies will be carried on directly with the property clerk. Correspondence relating to the actual settlement of property accounts will be carried on with the property auditor, Ogden, Utah.

SIGNING.

Prompt Action Required.

Neither in Washington nor in the district or supervisors' offices must the absence of any officer interfere with action upon correspondence. Even when final action can not be taken at once, the letter should be acknowledged immediately and the correspondent informed of the date upon which action will be taken.

Each member who prepares letters will keep a basket on top of his desk, in which only unanswered letters or other matters needing immediate attention will be placed. Unanswered letters or other papers dealing with unfinished current business must not be kept in drawers or pigeonholes. Important papers will be safely put away at the close of each day.

Washington Office.

Letters to District Foresters will be signed only by administrative officers of the Forest Service. Letters to the public will be signed by members in Washington below the rank of assistant chief of office or of administrative assistant only when authorized by the chief of branch concerned, and then only as acting chief of office.

District Offices—Details as Acting District Forester.

In the absence of the District Forester, district correspondence will be signed by a designated assistant district forester as acting district forester.

No member of the district office below the rank of assistant district forester will sign official mail, except under the authority of the District Forester, and then only as acting assistant district forester.

Supervisors' Offices.

In the absence of the supervisor, the deputy supervisor will, as a general rule, sign as acting supervisor. If both the supervisor and deputy supervisor are absent, the supervisor will detail, in writing, a member of the Forest force to serve as acting supervisor, who will handle all business of the office, with the exception of important matters, which he should hold until the supervisor's return. No Forest correspondence will be signed by the member of the Forest force "for the supervisor" or "per" the member's own name or initials.

Clerks Seldom Acting Supervisor.

It may be necessary for an acting supervisor to approve important papers which may be required as evidence. It is important, therefore, that the

approving officer be entirely competent to pass on their correctness. For this reason the practice of authorizing a clerk to sign as acting supervisor should be discouraged. Forest clerks who are thoroughly competent may, however, in the absence of the supervisors, act on and answer routine mail.

DISTRIBUTION.

Duties of Mail Clerk.

The mail clerk will open and refer to branches and offices in Washington, and to offices and sections in district offices, by dating stamp, all letters and telegrams except those obviously personal and those addressed to the district fiscal agent and to the district assistant to the solicitor, which will be delivered unopened. Telegrams will always be referred by messenger as soon as they are received. In each branch and office one person will be designated by the chief to whom incoming mail will be delivered.

All incoming mail, no matter where it is received, will be stamped to show date of receipt. Letters, maps, or papers which have any bearing on applications of any kind must on no account fail to show the date received.

References to Other Offices and Districts.

When a letter pertains to the work of an office other than that to which it has been referred the clerk charged with the receipt of mail will refer it, by rubber stamp, to the right destination. If the reference is to a district, notice of such reference will be given to the writer by postal card (Form 41 or 42). If, however, it is necessary to reply by letter to a letter which is to be referred from Washington to a district, an extra carbon, together with the letter acknowledged, will be sent to the District Forester stamped "Action required" or "For information," as may be appropriate.

Reference to Other Departments and Bureaus.

The reference of routine communications which require attention in other bureaus or divisions of the Department of Agriculture or in the General Land Office or in the Geological Survey will be made by rubber stamp, the blank space in the stamp to be filled in with pen. Such routine communications will be referred to the appropriate bureau or division, and not to any person by name. When such referred communications require comment or explanation, the reference will be made by letter addressed to the chief and signed by the Forester.

With the exceptions noted above, the reference of routine communications for attention in executive departments other than the Department of Agriculture will be made by indorsement prepared for the signature of the Secretary of Agriculture and addressed to the secretary of the executive department concerned.

Letters on Law Matters.

Letters requiring answers which involve interpretations of the law or the discussion of legal requirements or procedure should be merely acknowledged in the appropriate office and referred to the Solicitor of the department for answer. In letters pertaining to Service matters, but incidentally involving questions of law, the Service portion should be answered and extracts of the portions pertaining to law should be forwarded to the Solicitor.

FORM OF CORRESPONDENCE.

WASHINGTON AND DISTRICT OFFICES.

Spacing.

All letters will be doubled spaced, except for quotations, which will be single spaced.

Neatness.

No soiled or rubbed letter will be signed nor any letter in which corrections are carelessly made.

Copying Ribbon—Record Ribbon.

Purple copying ribbon will be used for letters prepared for the signature of the Secretary of Agriculture. The ribbon should be changed often enough to insure good press copies. All other letters will be written with black record ribbon.

Margin.

Letters should have a margin of approximately 1 inch on each side of the page.

Legal Documents.

All legal documents will be written on letter-size paper.

Numbering Pages—Initialing Pages.

The pages of all letters and documents, except those of only one page, will be numbered at the bottom of the page, in the middle. To give space for the number, the last line on the page should be at least three-quarters of an inch from the bottom. When a letter is more than one page, all pages except the first will bear the initials of the person addressed, on the left side in a separate line at the top, triple spaced above the body of the letter.

Paper.

Correspondence and final reports will be written on white paper, and all memorandums and scratch copies, even though typewritten, on yellow paper.

Date.

The date should be half an inch below the lowest printed line on the letterhead. The month should not be abbreviated. Figures alone should be used for the day, as "March 30."

The date will be omitted in letters prepared in the Washington office for the signature of the Secretary of Agriculture until after such letters are initialed by the Forester, but will be inserted before the letters are forwarded to the Secretary for signature. The date will be omitted in letters prepared in district offices for the signature of the Secretary or of the Forester, and will be inserted on the letters and the accompanying carbons in the Washington office.

Address.

The name and address should be double spaced when they require but two lines, and single spaced if more than two.

Special care will be taken to prefix the correct title, either official or honorary.

Ordinarily Government officials, including officers of the Forest Service, will be addressed by their official titles only. The titles will be omitted from letters written to members of the Service by name.

Salutation.

"Dear Sir" should ordinarily be used, unless the letter answered has a more intimate form of salutation. Only in very formal letters should "Sir" be used. Titles should be written out.

Complimentary Close.

With "Sir" use "Very respectfully"; with "Dear sir", "Very truly yours"; with "Dear Mr. ———", or "My dear Mr. ———", "Very sincerely yours."

Language—Brevity.

Use direct, clear-cut language. Avoid odd or lengthy words when shorter, simpler ones will express the idea. Be concise but courteous. Avoid laborious statements, the essence of which might well be expressed in half the space. Very few letters need be longer than one page.

Avoid Preambles.

Never use the substance of the letter received as a preamble to the reply. Unless the letter to be answered has already been acknowledged and further reference to its subject matter is necessary, its contents should not be indicated in the initial sentence. Reference must always be made, however, to file numbers or initials for identification.

Form of Acknowledgment—Reference to Key Initials.

For acknowledgments or replies to the public, the initial sentence should usually be in this form: "Your letter of March 30 is received." In correspondence between the various officers of the Service reference should also be made to the key initials on the letter answered, including the case or subject designation if its designation differs from the one to be used in reply.

Courtesy.

The phrase "you will" should not be used in giving orders or instructions. It is peremptory without adding force, and a friendlier tone is more courteous and fully as effective.

Severity.

Severity of expression will be avoided in conveying reprimands in correspondence.

Impersonal Tone.

So far as practicable, letters should be impersonal in expression.

Punctuation.

It should be borne in mind that the purpose of punctuation is a clear understanding of the text by the reader. Too little punctuation is almost as bad as too much.

Promises.

When a promise is made, do not use such indefinite phrases as "within a few days," "before long." Specify the date upon which action will be taken, or, in the rare cases when that is impossible, give the approximate date, as "not later than ———."

Letters of Identical Instructions.

Letters of identical instructions from the Washington office to the six district foresters will not be typewritten six times in order to furnish each District Forester with an original addressed to him individually, but such letters will be addressed simply "District Forester," and the necessary number of carbons will be marked at the top "ORIGINAL." It will be understood that a thin paper carbon copy of a letter from Washington, *when thus marked*, so far from being less important than the ordinary letter, is a letter of exceptional importance, since it contains instructions for all the districts, and must be treated as such by the district foresters. Such letters will bear the original signatures of the administrative officers who send them.

NATIONAL FOREST OFFICES.

Supervisors' Offices.

Wherever they will apply to the business conducted by the supervisor the foregoing general instructions will be followed in the preparation and handling of his correspondence.

The following additional rules will govern:

Never write a letter of transmittal in forwarding any document unless some explanation about it is needed. Indorse the document "Respectfully forwarded to the District Forester," sign, and forward it with the recommendation, if any is required, to the District Forester.

Supervisors will conduct all their correspondence in typewriting, except when away from their offices. Machines will be furnished upon requisition.

Letters and reports of subordinates transmitted by a supervisor to the District Forester must be originals, not copies made by the supervisor. The supervisor will keep copies when needed for his own records or, when necessary, request the return of the originals.

Rangers' Correspondence.

Unless a ranger is equipped with a typewriter all rangers' letters will be written in ink or indelible pencil, and on only one side of the sheet. The subject designation for supervisors' letters will be followed by the rangers. Correspondence with the public should be through the supervisor's office, but if it is essential to the prompt dispatch of business for the ranger to correspond directly with a user he will do so. A carbon copy will be kept of each letter and telegram written by a ranger.

RECORD OF PROMISES.

The Promise-Card Box.

Record of all promises involving future action will be kept in all permanent headquarters.

Except in rangers' headquarters, where the records will be kept on desk calendars, the equipment will consist of a standard promise-card box, daily and monthly guide cards, 3 by 5 inches, and plain white cards, 3 by 5 inches.

A promise will always be recorded at the time it is made. The date of fulfillment will be written on the first line of the promise card, and any change which may later become necessary should be entered on the same line. Below the date will be written the name of the person to whom the promise is made or who is otherwise concerned. The card will be dated in the lower left-

hand corner. Every card will contain a memorandum or reference of sufficient definiteness to give a clear understanding of the promised action to anyone who may be required to complete it.

If the promise can not be fulfilled on the designated date, the person to whom it was made will be so informed, and the card will be re-dated for action and changed to the time guide for the new date.

When the action promised is long in advance or dependent upon contingencies not yet developed, it will be found useful to file the card so that it falls due at short intervals until the promise is fulfilled.

If when the promise is fulfilled no letter is required, the card will be checked and filed with the papers pertaining to the case; but if the record is completed by the filing of a carbon the card will be destroyed.

Follow-Up System.

The same equipment will be used to follow up action requested, and the follow-up cards will be prepared and filed in the same way as promise cards.

Requests to Field Officers.

To follow up requests to field officers for reports or action a white postal card (Form 326) and three yellow slips, 3 by 5 inches, will be used.

The date, case heading or subject, and key initials of the office will be entered on the slips and card by carbon duplication and the card forwarded to the supervisor with the request for report or action.

One slip will be filed in the office promise-card box two weeks ahead, as a reminder, the other two will be sent with the card to the supervisor. He will place the card and one slip in his promise-card box and send the other to the ranger concerned.

The ranger will enter the date on which work will reach the supervisor and return the slip. The supervisor will place this slip in his box as a promise from the ranger, destroy the other slip, enter on the card the date on which he will take the action required, and sign and mail the card as a post card to the District Forester.

The reminder slip will be destroyed in the district office and the card filed under the date given by the supervisor.

CARBONS.

Carbon copies will constitute the only record of outgoing correspondence. One carbon of every outgoing letter and telegram will always be kept in the office files.

Each letter written in the district office for the signature of the Secretary or the Forester will be prepared with three carbon copies. Two will be sent to Washington with the letter for signature and the other held in a waiting file by the file clerk. After the letter is signed the signature will be stamped on both carbons, one carbon filed in the Washington office and the other returned to the district office, where the carbon in the waiting file will be destroyed.

Carbons Mailed for Information.

Every letter written to a District Forester which concerns the business of a particular Forest or refers to any specific case will be accompanied by a carbon copy for transmittal to the supervisor, with such supplemental remarks or instructions as the District Forester may wish to add.

A carbon copy of every letter written in the Washington office to any person outside of the Service which concerns business in a district will be mailed to the District Forester. In case it refers to business on a particular Forest two copies will be sent, one for the district files and the other for transmittal to the supervisor.

Supervisors should always be sent copies of letters written in the district office which concern their Forests. Whenever a letter written by the District Forester to a supervisor concerns a ranger's work an extra carbon will be made for the ranger.

Instructions in Carbons.

Great care must be taken in all correspondence to avoid writing a separate letter when a carbon copy would suffice. Since carbons received in this way may contain important instructions, the recipients should always read them carefully.

Carbons to Secure Approval of Recommended Action.

When a request is made by the District Forester for the approval of contemplated action by the Forester or the Secretary, an approval space as follows should be provided in the lower left-hand corner of the letter:

(Date) ————, 19—.
Approved:
——— ———,
Secretary (or Forester).

Two carbons should be made—one to accompany the original letter to Washington and one to be retained in the waiting file in the district office until the return of the carbon showing the action of the approving officer.

INITIALING.

Every Document Must Be Dated and Initialed or Signed.

Absolutely, without exception, every statement, memorandum, map, or document of any kind will be initialed or signed for authorship, and dated.

Washington and District Offices.

When a letter is of more than one page, all initialing will be on the first page of the file carbon. Carbons should never be filed unless they bear the stamped signature or the written initials of the chief of the branch or office in which filed.

Signatures will not be stamped on carbons until letters are ready for mailing. The stamping of the signature will be a certificate that the letter has actually been mailed.

Letters will not be initialed on the original, except that letters for the signature of the Secretary will be initialed by the Forester in the upper left-hand corner of the first page. The carbons of letters written for the signature of the Forester will be initialed by the author in the lower left-hand corner. Above the initials of the author will appear the initials of the chief of the office in which the letter was prepared and of the chief of branch or District Forester, in the order given. Initialing for authorship will be omitted if the signer has dictated the letter himself.

Letters Affecting More than One Branch.

When a letter or document prepared in one branch is of interest to another branch it should be initialed by the chief of the latter to signify his concurrence or to fix his responsibility for carrying out proposed work which falls to him.

Stenographer's Initials—Initialing for Inclosures or Promised Action.

The stenographer will stamp his initials in the lower right-hand corner of each carbon. If the letter contains inclosures, or if future action is promised, the stenographer will stamp his initials twice, as a guaranty that the inclosures have been prepared, or that the action promised has been noted. When the action can not be taken immediately, a promise card will be prepared, to be retained by the stenographer, or given to any other person responsible for taking the action promised. When a letter entails typewriting by one stenographer and the preparation of inclosures or other action by another, the initials of both stenographers will be stamped in the lower right-hand corner of the carbon.

When the signer makes any changes with the pen, in a letter of which he is not the author, he will return the letter to the author in order that the changes may be noted and entered on the carbon, before the letter is sent to the mail clerk for mailing.

Carbon copies of signed letters sent as instructions or merely for information will bear no initialing, but will be exact duplicates of the original letters and not of the file carbons.

In approving memorandums, requisitions, and other office papers only initials will be affixed.

Letters prepared in the supervisor's office will follow the same routine in regard to preparation, form, inclosures, initialing, and dating as prescribed for the district office.

TELEGRAMS.

The procedure for correspondence applies equally to telegrams. The following general rules should be carefully observed: The telegraph should be used only when the delay in using the mail would be injurious to the public interests. Omit all unnecessary words. In a message from one official or employee to

another titles should not be used. In a great many cases names of both address and signature may be limited to single words. Numbers should be expressed in words. Ordinal numbers must not be abbreviated. "Night" messages should be used when practicable.

Since in official telegrams the address and signature are paid for as part of the message, the following abbreviated addresses will be used:

To Washington Office:
Forester, Washington, D. C.
To district offices:
Forestry, San Francisco, Cal.
To Madison Laboratory:
Forestry, Madison, Wis.
To property clerk or auditor:
Smith, Forestry, Ogden, Utah; or Falck, Forestry, Ogden, Utah.
To supervisors:
Forestry, Prescott, Ariz.

All officers in charge of permanent field headquarters will register their telegraph addresses with the Postal and Western Union Telegraph companies. The supervisors will inform the District Forester by mail of any change in the address registered.

In telegrams only the first word of the message and proper names will be capitalized, and punctuation will not be used. Serious errors in telegrams received make this rule necessary. Telegrams should be signed with the last name only.

Unsigned telegrams will under no circumstances be placed in the messenger's basket, but will be sent by messenger for initialing or signature. The messenger will in every case find the person or persons whose initials or signature is required, if in the building, and if out of the building will at once report to the person by whom the telegram was prepared. In the Washington office day telegrams when signed will be delivered to the telephone room for forwarding. In district offices outgoing day telegrams will be delivered to the mail clerk. In both the Washington and district offices all outgoing night telegrams will be delivered to the mail clerk and sent at the close of the day. When a telegram is written at or near the close of office hours the person by whom it is prepared will make sure that it is signed and sent before leaving for the day.

The file designation will be placed on the file carbon of each telegram.

Supervisor's Office.

Whenever a supervisor leaves his headquarters with no one in charge, he should notify his telegraph office of the place where he can be reached by mail when not in direct telegraphic communication. Supervisors need not hesitate to use the wire when important matters demanding quick action arise, but they must make all telegrams as brief as possible.

MAILING.

Washington Office.

In branches which have clerks specially assigned as mailing clerks, messengers will deliver signed letters, with accompanying papers, directly to such clerks, who will be responsible for all mailing from the branch. In branches and offices without specially assigned mailing clerks, signed letters will be returned to the stenographers for mailing.

Letters to District Foresters will be mailed from Washington in envelopes with printed addresses.

District Offices.

In district offices the messengers will deliver signed letters, with accompanying papers, directly to the mail clerk. Letters to the Forester and to the forest supervisors will be mailed in envelopes with printed addresses.

Envelopes with printed addresses should be used whenever the volume of correspondence with any addressee justifies it.

Envelopes for correspondence sent to the Forester, the district foresters, or the forest supervisors, will be kept open until the end of the official day, when they will be sealed and mailed.

Supervisors' Offices.

All letters written to the District Forester on the same day will be mailed in one envelope. A special desk basket will be set apart in which all mail

intended for the district office will be deposited, with inclosures securely attached to letters. At the close of the day the letter, without being folded, will be placed in a large envelope and mailed. Printed envelopes will be furnished on requisition. When the day's mail consists of but one letter, however, the letter should be folded and mailed in an envelope of the ordinary size. Vouchers will not be inclosed with other mail.

ENVELOPES AND INCLOSURES.

The stenographer will address envelopes for all letters except those to the Forester, to a District Forester, or to a Forest Supervisor (see Mailing) before submitting the letters for initialing or signature.

The stenographer will place in the envelope the inclosures which are to accompany the letters to be returned to the stenographer for mailing. When the mailing is to be done by another clerk the inclosures will be securely clipped behind the letter for signature.

The stenographer will not initial for inclosures until the inclosure has been actually made or action taken as above; nor will he initial as a token that other action promised in the letter has been performed until its performance has taken place or the necessary steps for its performance have been taken, as prescribed under "Carbons" and "Initialing."

When a document to be inclosed by the stenographer is of such a character that to withhold the letter from signature until the inclosure has actually been made would cause delay in mailing, the stenographer will initial in the manner prescribed under "Initialing," and attach by clip a blue card to the addressed envelope as a reminder that the inclosure has not yet been made. This procedure will likewise be followed when a document to be inclosed is submitted with the letter for the information of the signer.

Identification of Material Mailed Separately.

When it is necessary to mail under separate cover maps or publications referred to in correspondence, a slip of paper bearing the designation and date of the letter written will be attached to the material. In case such material is mailed without a letter of transmittal, it must in every case be accompanied by a slip of paper bearing the key initials of the branch or office in Washington or the office or section in the district office for which it is intended.

FILING.

Washington Office.

The correspondence files of the branches and offices in Washington may be assembled in branch file rooms or located in the individual offices, as may be most conducive to efficiency.

District Office.

In like manner the District Forester may, in his discretion, maintain a central file room in which all records of the district office will be assembled, or he may maintain separate files in offices or sections.

Description of Files.

The files will be maintained upon a subjective classification arranged on a self-indexing basis. No card record of filed correspondence will be made.

The complete subjective classification, with illustrations of the subject designations to be used in the Washington, district, and supervisors' offices, is given in a mimeographed circular headed "Subject designations and filing system." This classification must not be varied in the district and supervisors' offices without authority from the Forester.

Each branch and office file will consist of two general sections:

(1) A classified section, in which will be filed, behind appropriate guides, all correspondence which bears a subject designation expressed in words (e. g., F., Personnel, Jones, J. H.).

(2) A miscellaneous section, in which will be filed alphabetically, without regard to Forests or subjects, all correspondence bearing as a designation the letter Z after the branch or office key initial or initials (e. g., FZ, DZ, OOZ).

Correspondence which bears neither the letter Z nor a subject designation will be returned, with accompanying papers, to the office in which it originated for the proper filing designation.

All correspondence will be filed flat in vertical filing drawers, except where branches and offices in Washington now use for alphabetic files furniture which

is especially designed for horizontal and not vertical filing. No new furniture designed for horizontal filing will be purchased.

As correspondence is received for filing the file clerk will fasten the carbon to the answered letter. When the carbon is not accompanied by an answered letter, its pages will be fastened together as a unit for filing.

In the miscellaneous section, when names of correspondents begin with the same letter, alphabetical filing will be by the spelling of the surnames, as Jenkins, Johnson, Jones. When correspondence from two or more persons of the same surname is filed together, it will be filed alphabetically by the initials of the given names, as A. Jones, H. Jones, W. Jones. If the initials are also the same, the spelling of the first name will be the guide to the filing, as Albert Jones, Alfred Jones, Arthur Jones. Correspondence filed under the same name will be filed chronologically, with the most recent letter on top. Correspondence with members of the Forest Service, with members of other bureaus, and with State officials will be filed under the name of the office of the correspondent, and not under his name or title. Correspondence with officials of firms, associations, and other private organizations will be filed by the name of the writer when the letter does not relate to the business of the organization.

Circular Letters.

Circular letters will be filed as other correspondence.

Cross Reference.

Cross references will be made whenever they will be of assistance in locating papers or correspondence. For example, Jones may write regarding the Smith timber sale. In that event Jones's letter and a carbon of the answer will be filed in the folder of the Smith timber sale. An extra carbon of the answer will be filed alphabetically as a cross reference in the miscellaneous section. The typewritten subject designation on the cross reference carbon should be crossed out with pencil and the appropriate Z designation substituted before filing. In case no answer is made to the Jones letter, a sheet of yellow paper bearing the name of Jones and the subject designation under which his letter has been filed will be filed under "Jones" in the miscellaneous section.

As an additional safeguard against failure to date maps, statements, or memorandums prepared in the Forest Service, file clerks must see to it that no paper without date and initialing or signature is filed.

If they wish, supervisors may insert behind the miscellaneous section a guide marked "Applications for positions," with either a single folder or an additional A to Z file, as may be required by the volume of business.

Rangers' Files.

Each ranger will be supplied with such standard filing equipment as, in the judgment of the supervisor, his business warrants. After receiving instructions from the supervisor on the method of keeping his files he will be held responsible for the completeness and correctness of his files.

Rangers' Record.

All records and notes of ranger district business should be considered as official, and rangers should keep them in such shape that they can be turned over to a successor as part of the regular official records of the district.

TRANSFERRING.

Washington, District, and Supervisors' Offices.

Correspondence filed vertically in the miscellaneous section will be transferred periodically, with the accompanying alphabetical guide cards, to wooden transfer units of the same size as the drawers used for the current file. The entire file from A to Z will be transferred. Correspondence filed alphabetically in the horizontal filing drawers in the Washington office will be transferred as drawers are filled.

Correspondence filed in the classified section under designated subjects, but not under designated transactions, will be transferred periodically, with the accompanying guide cards and folders, to wooden transfer units and new guide cards inserted in the current files.

Correspondence in designated transactions will be transferred as the transactions are closed, with the inclosing folders, to wooden transfer units labeled "Closed file." The folders will be arranged in the closed file in the same relative order as in the current file.

Transfer units for the miscellaneous section will be labeled with the appropriate letters of the alphabet and with the inclusive dates.

Transfer units for correspondence under designated subjects, but not under designated transactions, will be labeled with the appropriate designation and the inclusive dates.

Transfer units for correspondence under designated transactions will be labeled with the appropriate designation, and, when the transferred folders fill more than one unit in a single class of transactions, with the inclusive letters in the alphabetical arrangement of the folders.

BOUNDARIES.

GENERAL.

Creation by President Authorized by Act of Congress.

The act of March 3, 1891 (26 Stat., 1095), provides:

> SEC. 24. That the President of the United States may, from time to time, set apart and reserve, in any State or Territory having public land bearing forests, in any part of the public lands wholly or in part covered with timber or undergrowth, whether of commercial value or not, as public reservations, and the President shall, by public proclamation, declare the establishment of such reservations and the limits thereof.

The act of June 4, 1897 (30 Stat., 11), authorizes the President to revoke or suspend any proclamation or to reduce the area or change the boundary lines of such forests. The act further provides that the reservations—

> * * * shall be as far as practicable controlled and administered in accordance with the following provisions:
>
> No public forest reservation shall be established, except to improve and protect the forest within the reservation, or for the purpose of securing favorable conditions of water flows, and to furnish a continuous supply of timber for the use and necessities of citizens of the United States; but it is not the purpose or intent of these provisions, or of the act providing for such reservations, to authorize the inclusion therein of lands more valuable for the mineral therein, or for agricultural purposes, than for forest purposes.

Under date of February 7, 1910, the Secretary of the Interior and the Secretary of Agriculture submitted a joint letter to the President, which was approved by him, defining more fully the character of lands contemplated by the two acts above referred to, as follows:

> 1. Lands wholly or in part covered with brush or other undergrowth which protects streamflow or checks erosion on the watershed of any stream important to irrigation or to the water supply of any city, town, or community, or open lands on which trees may be grown, should be retained within the National Forests, unless their permanent value under cultivation is greater than their value as a protective forest.
>
> 2. Lands wholly or in part covered with timber or undergrowth, or cut-over lands which are more valuable for the production of trees than for agricultural crops, and lands densely stocked with young trees having a prospective value greater than the value of the land for agricultural purposes, should be retained within the National Forests.
>
> 3. Lands not either wholly or in part covered with timber or undergrowth, which are located above timber line within the Forest boundary or in small bodies scattered through the Forest, making elimination impracticable, or limited areas which are necessarily included for a proper administrative boundary line, should be retained within the National Forests.
>
> 4. Lands not either wholly or in part covered with timber or undergrowth, except as provided for in the preceding paragraphs, upon which it is not expected to grow trees, should be eliminated from the National Forests.

Creation Restricted in Six States.

In an amendment to the agricultural appropriation bill approved March 4, 1907 (34 Stat., 1256), it is provided that "hereafter no forest reserve shall be

created, nor shall any additions be made to one heretofore created within the limits of the States of Oregon, Washington, Idaho, Montana, Colorado, or Wyoming, except by act of Congress." The power of the President to create or enlarge National Forests in other States and in the Territories remains unaffected by this act.

Temporary Withdrawals.

Temporary withdrawals of land from entry may be made by the President under the act of June 25, 1910 (36 Stat., 847), when the creation of new Forests or additions is contemplated and a withdrawal is deemed necessary. Such withdrawals can not be made within the States of Colorado, Idaho, Montana, Oregon, Washington, or Wyoming, unless there is pending legislation which proposes the inclusion of the areas within a National Forest.

National Monuments.

The act of June 8, 1906 (34 Stat., 225), provides for the protection of objects of historic and scientific interest on lands controlled by the Government, and authorizes the President to create, by proclamation, national monuments for their preservation. The act also authorizes the Secretary of the Interior, on behalf of the United States, to accept deeds of gift of privately owned land containing such objects.

What May Be Included.

When a national monument is created within a National Forest, it is under the jurisdiction of the Forest Service. The objects which may properly be recommended for reservation under this act are cliff dwellings, pueblo ruins, ancient rock paintings, unique topographic or geologic features, historic landmarks, and groves of rare trees in danger of destruction.

Cooperation in Selection.

The Forest Service will cooperate, when necessary, with the Bureau of American Ethnology of the Smithsonian Institution in protecting and securing information regarding objects of historic and scientific interest located on or near the borders of National Forests.

Not to Be Listed to Homesteaders.

No lands containing such object will be listed under the Forest-homestead act.

BOUNDARY CHANGES.

Policy—Additions and Eliminations.

Although boundary questions as a whole may be considered as fairly well settled in so far as the addition or elimination of large areas is involved, yet it is safe to assume that only in a few exceptional cases are the boundary lines definitely and finally located exactly where they can be said to include only such lands as will for all time be classed as chiefly valuable for timber growing and watershed protection purposes and to exclude all lands, with the exception of such small areas as must be retained for administrative reasons, as may for all time be classed as chiefly valuable for agriculture, mining, grazing, or other uses. As the population increases and the demand, not only upon the timber and the water resources of the National Forests, but also for lands for other uses, principally agriculture, becomes more intensive and lands of all classes acquire correspondingly higher values, it will become necessary to draw the lines more and more closely between those lands chiefly valuable for forest purposes and those lands chiefly valuable for other purposes, which it is the intent of Congress should not be withheld from private settlement and development. In the future, therefore, boundary questions concerning additions to and eliminations from National Forests, while having to do with much smaller areas than in the past, will be more difficult to determine and will involve much closer and more careful investigation of all the factors involved, many of which will be of a highly technical nature. The classification of lands within the National Forests in order to determine the comparative values and the highest use to which they may be put should consequently become increasingly more intensive, in order that the recommendations submitted may be well founded.

Inter-Forest Boundaries.

Boundaries between adjoining Forests will generally be upon topographic lines, although legal subdivisions may be followed. They will be determined after a

careful consideration of the convenience of the users, and of the suitability of the proposed boundary from the point of view of, economy in and efficiency of, administration.

STATE SCHOOL LANDS—EXCHANGE.

In furtherance of the indemnity rights of the several States under the provisions of section 2275 of the Revised Statutes of the United States, as modified by the act of February 28, 1891, cooperative agreements may be, and in several instances have been, entered into between the Department of Agriculture and the State, for the exchange of school lands within the National Forests for solid blocks of land of equal acreage and value along the borders of Forests.

TOWN SITES.

Lands in National Forests embraced in valid town-site settlements, made before the withdrawal of the land and creation of the Forests, may, unless abandoned, be entered and patented under the town-site laws, without regard to the period which has elapsed after their settlement or after the establishment of the Forest, and without the necessity of eliminating the town-site area from the Forest.

When it is desired to establish a town site on lands within a National Forest, a petition should be addressed to the District Forester. An investigation will be made under his direction to ascertain if it is necessary and advisable to use such lands for town-site purposes. If approved an Executive order to exclude the lands may be issued to enable the applicants to proceed under the town-site laws and the regulations of the Department of the Interior.

PROCEDURE.

SUPERVISORS PROCEDURE.

Examinations.

The examination of Forest boundaries will be undertaken by direction of the District Forester under the instruction of the supervisor in charge of the Forest concerned or, in the case of a new area, under the supervisor of the nearest Forest.

Extent of Examinations.

The examinations should not be confined strictly to the area described in letters of instruction, but must embrace all lands in the locality which are suited to National Forest purposes. The examiner will be held responsible for covering thoroughly all lands in the section to which he is assigned.

Data Necessary.

Before beginning field work the examiner should be in possession of sufficiently detailed geographic and alienated land data to enable him definitely to locate proposed boundaries and to determine in the field the title of the land.

Field Work and Survey.

The accuracy of the survey that will be necessary will depend upon the value of the land involved. If scattered additions are contemplated in heavily timbered country it may be necessary to locate and cruise each forty; on the other hand, if it is simply a question of the addition or elimination of a strip of land whose general characteristics is known a much less detailed survey will ordinarily be sufficient. In every case, however, it is essential that the examiner know exactly where he is at all times in relation to the corners and lines of the public land survey. To be sure of this, work with the compass may be necessary.

Photographs.

When it is feasible, photographs should accompany a report to illustrate not only the general characteristics of the country, but important specific points as well. Special effort should be made to secure photographs if the value of the area for forest or watershed protection purposes is at all doubtful or if the elimination of an area has been requested by petitions.

Maps.

A map which shows land classification and a title, or status map, showing alienated lands, should be submitted with each report.

Land-Classification Map.

The land classification should be compiled on the scale that best suits the requirements of the case at hand. When a scale of 1 inch to the mile is used the map should be on atlas correction sheets (Form 979), or if only a small area is involved on inch-to-the-mile township plats. In some cases where it is desirable to show the relation of the change involved to the entire Forest it may be necessary to use a map on the scale of one-half inch to the mile. The map should show land surveys and topography in india ink. For unsurveyed lands the examiner should prepare a sketch map showing drainage and as much additional topographic data as may be practicable.

The land classification shown on the map should be in conformity with the standard Forest Service scheme.

Title Map.

The title map will consist either of a duplicate of the base map or of township plats which cover the area, and will show the different classes of alienation by distinctive colors. The map should be provided with an appropriate legend. These data should be obtained before a field examination is undertaken; they may be secured from the supervisor's office, from the district office, or from the local land office.

The Boundary.

On both the land classification and the title maps the existing forest boundary will be shown by a heavy blue-pencil line, and the recommended boundary of either additions or eliminations by a heavy red-pencil line. Whenever practicable the boundary will run on section or quarter-section lines, but where valuable timber is involved and the land is heavily alienated, it may run on 40-acre subdivisions. In a region covered by the General Land Office surveys a stream may be used for the exterior boundary only when it is shown as meandered on the official land-office plats. In unsurveyed regions any stream may be used as an exterior boundary which has a reasonably fixed channel and flows continuously throughout the year. The alienations and the forest cover outside the recommended boundary should be shown for a distance sufficient to convince the reviewing officer that the boundary has been properly located. When the question is one of elimination these same facts should be shown inside the existing boundary. Both maps should be dated and should bear the name and title of the examiner.

Report.

The examiner's report should supplement the information given on the map with such detailed description of the natural features of the area in question and of the economic conditions governing its use as are necessary to confirm his recommendations.

The following outline of topics is suggested as having a bearing on boundary changes. Each should be discussed in so far as it has relation to the particular case under consideration.

Outline.

(1) Location and area.
(2) Description of topography.
(3) Climate—its effect on forest growth and agricultural possibilities.
(4) Forest:
    (*a*) Silvicultural types.
    (*b*) Amount and class of timber.
    (*c*) Reproduction.
    (*d*) Value as protection cover.
(5) Fire damage.
(6) The value of the area for power, reservoir development, and other public uses.
(7) Settlements.
(8) Industries:
    (*a*) Agricultural.
    (*b*) Grazing.
    (*c*) Lumbering, etc.
(9) Transportation, roads, and trails.
(10) Public sentiment.
(11) Administration.
(12) Conclusions and recommendations. A clear recommendation for or against the change, with brief summary of reasons.

Report Submitted to Supervisor.

The examiner will submit to the supervisor for indorsement his report in triplicate, with two copies each of the land classification and title maps. The supervisor will forward the report in duplicate to the District Forester, with one copy each of the classification and title maps, accompanied by any further statements and recommendations desired. The retained copies of the report and maps will be filed in the supervisor's office.

Inter-Forest Changes.

When changes are contemplated in inter-Forest boundaries the supervisors of the Forests affected will confer and submit a joint report and recommendation to the District Forester. In case of disagreement the District Forester will decide.

Temporary Withdrawals.

If the supervisor, either upon his own findings or upon those of a reporting officer, is convinced that a withdrawal is necessary, he will submit a brief report to the District Forester covering the urgency of the situation and describing the character of the land to be withdrawn. The report should be accompanied by a plat of the area.

National Monuments.

Upon the discovery of an object worthy of inclusion in a national monument the supervisor will submit a detailed report to the District Forester. This report should be accompanied by a tracing showing the location of the objects by legal subdivisions or by metes and bounds. When feasible, photographs also should be submitted.

DISTRICT OFFICE PROCEDURE.

Action on Reports and Maps.

Upon receipt of reports and maps from the supervisor recommending boundary changes the District Forester, if he approves the changes, will transmit the report in duplicate, accompanied by classification and title map to the Forester.

Secretary's Letter.

Upon receipt of notice of the Forester's ratification of the boundary the District Forester will prepare a letter to the Secretary of the Interior or to the President for the signature of the Secretary of Agriculture. This letter will explain the necessity for the proposed boundary change and transmit the draft of the proclamation for approval or signature. In the case of inter-Forest boundary changes in connection with which no exterior changes are being made, and in this case only, the letter should be addressed to the President. In the case of eliminations the letter should state whether the lands eliminated contain valuable power sites. If no information to that effect is of record, the letter should so state. Attention should also be called to administrative sites retained as isolated tracts of Forest land and to any tracts embraced within eliminated areas which are not desired longer for administrative purposes and which should be released. The original letter with two carbons should be forwarded to the Forester, and a third carbon is retained in the awaiting file.

Press Notice.

At the time the Secretary's letter is written the District Forester will prepare also an undated press notice, in duplicate, on yellow paper. This should be a short statement for publication, describing the change in boundary and its need.

Number of Lithographic Prints.

It may be advisable at times to issue more or fewer lithographic prints than the regular number, depending upon the probable permanency of the boundary line as established by the proclamation. This may be done if the request is sent to the Forester before the edition is printed.

Ranger Stations Retained as Isolated Tracts.

When it is necessary to eliminate lands surrounding administrative sites whose further retention is desirable the administrative site will be retained and shown on the tracing as an isolated tract of Forest land.

Recommendations for Withdrawals.

Upon receipt of recommendations from the supervisor for the withdrawal of land under the act of June 25, 1910, the District Forester will pass upon the

advisability of the proposed action and, if he approves it, will prepare a Secretary's letter to the Secretary of the Interior, transmitting a draft for an executive order and recommending that it be sent to the President for signature. When not accompanied by a tracing the Secretary's letter should state in which land district the area lies. Four copies of the Secretary's letter should be submitted.

Release of Withdrawals.

Upon receipt of notice that a proclamation has been signed establishing a National Forest, the District Forester should at once determine if any lands held under temporary withdrawal in the vicinity of the National Forest should be released, and if so a recommendation to that effect should be made. This should be in the form of a Secretary's letter to the Secretary of the Interior, with three carbons, accompanied by a tracing which shows the area to be released. This tracing will, when practicable, be on special linen, crosslined on a scale of 1½ inches to the township. The letter should give the reason for the recommendation for release and should state whether or not the lands to be released embrace valuable power sites, or if the records do not disclose this fact, a statement to that effect should be inserted. The tracing should bear the title:

Proposed release near _____National Forest. State _____. _____ Meridian. _____ Land District. Area to be released _____. Recommended by _____, District Forester.	Approved by _____; Forester. Release requested _____. Release order signed _____. Opened to settlement _____. Open to entry _____. Area _____.

National Monuments.

Upon receipt of a report recommending the creation of a national monument, the District Forester will forward the report and map to the Forester with recommendations. The Forester will confer with the Bureau of Ethnology regarding the desirability of creating the monument and advise the District Forester of the decision.

Upon notice of approval by the Forester of a proposed monument, the District Forester will prepare the necessary Secretary letter and transmit four copies of it to the Forester with a tracing. The tracing for monuments embracing small areas should be drawn to such a scale as will admit of its being printed on a single sheet, legal cap size, without folding.

WASHINGTON OFFICE PROCEDURE.

Action on Petitions and Inquiries.

Upon receipt, by the Forester, of petitions or letters which pertain to changes in Forest boundaries, or to the creation of national monuments, a reply will be prepared for the signature of the official to whom the communication is addressed or referred. This reply will state that the matter is referred to the District Forester for consideration, and will promise further reply upon receipt of report from the District Forester. A carbon copy of the letter, indorsed "Action required," with copies of the correspondence to which it relates, will be sent to the District Forester, who will prepare appropriate letters for signature of the proper official, and submit them to the Forester for transmittal.

Letters will be prepared in the Washington office only when there is already on file sufficient information upon which a reply can be based, or when an immediate reply is necessary. In such cases carbons will be sent to the District Forester for his information, together with copies of the correspondence.

Action on Boundary Reports.

Upon receipt of reports, and of the District Forester's recommendations concerning changes in boundaries, accompanied by type and title maps, the status will be obtained, if that is desirable, and the report will be submitted to the various branch chiefs for initialing before being submitted to the Forester for final approval. The District Forester and the interested persons will be in-

formed of the decision by letter. Two colored diagrams, bearing date and showing the approved line, will be sent to the District Forester and an exact copy kept in the Washington office files.

Proclamations and Executive Orders, Prepared in Washington Office, Referred to Solicitor.

The texts of proclamations and executive orders will be drafted in the Washington office and submitted to the Solicitor for consideration.

Proclamation Diagrams, Requisition.

Requisition, Forms 273 and 988, is made upon Geography for each proclamation, tracing, and photographic negative reduced to the scale of 1½ inches to the township.

Photographic Prints.

Ten photographic prints are furnished, four of which are mounted on linen. Two of these mounted copies are sent to the district, one for the district's and one for the supervisor's file. The others are retained in the Washington office. Three unmounted prints are attached to the text of the proclamation and transmitted to the Secretary of the Interior.

In case of additions, a memorandum initialed by the Forester is inclosed also. This is for the files of the Interior Department, and sets forth the desirability of the addition. It is accompanied by a land classification map.

Post Cards Attached.

Two prepared postal cards are sent with the papers which go to the Secretary of the Interior; one of these is returned as a notification to the Forester that the recommended action has been taken and the proclamation submitted to the President for signature. The other goes on to the Bureau of Rolls and Library, Department of State, and is returned from that bureau as notification of the fact and date of signature by the President.

Announcement of Signature.

Announcement of the signing of a proclamation will be telegraphed to the District Forester; branch offices in Washington are informed by memorandum.

Press Notice.

The prepared press notice will be sent to the editor for release as soon as notification of the President's signature is received.

Transfer Print and Lithographic Copies.

After the proclamation is signed, requisition, Form 988, is made on the photographer for a transfer print and the proper number of lithographic copies of the diagram.

The State Department is furnished with 500 lithographic prints to be attached as a part of the printed proclamations. A portion of these are retained by the State Department and the remainder returned to the Forester. One hundred copies are retained in the Washington office and the balance sent in equal portions to the District Forester and the supervisor concerned.

Two copies of the signed Secretary letter of transmittal, together with two copies of the proclamation or executive order, will be sent to the District Forester, one for the district and one for the supervisor's files.

Maps Returned to District Forester.

The land classification and title maps will be returned to the District Forester for final filing.

Eliminations Open to Settlement and Entry.

In the case of the restoration to settlement and entry of areas eliminated two copies of the Commissioner's letter will be sent to the District Forester, upon receipt of notice from the General Land Office. A yellow memorandum will be prepared for the files of the Washington office. This will bear the date upon which the eliminated areas are opened to settlement and entry.

Action on Temporary Withdrawal.

In the case of approved temporary withdrawals six copies of an Executive order are prepared. Three of these are transmitted to the Secretary of the Interior with the prepared Secretary letter, two copies are forwarded to the District Forester for the files of the district and supervisor's offices, and one copy is retained for the Forester.

Release.

When land held under temporary withdrawal is recommended for release by a District Forester, blue prints will be made of the tracing which accompanies the recommendation, four to be sent with the prepared Secretary letter of transmittal.

Notice of Release Returned to District Forester.

When the Secretary of the Interior signs and forwards the order of release to the register and receiver of the local land office the Forester is furnished a carbon of the order. The tracing is returned to the District Forester, indorsed with the area, date of release order, and dates of restoration of the land to settlement and entry, together with two blue prints and two return copies of the Secretary letter. The blue prints and the copies of the letter will each bear indorsements identical with those on the tracing.

National Monuments.

The procedure followed in the creation and proclamation of national monuments is the same as that followed in boundary changes.

GRAPHIC INFORMATION.

FOREST SURVEYS AND MAPS.

"Instructions for Making Forest Surveys and Maps" is issued in pocket form for the use of field officers. This manual describes the instruments used, explains various methods of surveying, and specifies the forms for keeping field notes; these forms follow closely the style of the General Land Office.

The kind of survey, whether by transit, compass, or plane table, and the methods of making it, must be left to the judgment of the officer in charge, who will be guided in making his decision by the purpose for which the survey is made.

SURVEYING NATIONAL FOREST BOUNDARIES.

Marking Boundaries.

The boundary lines of every Forest and the boundaries of private lands within the Forests must be located and marked for the information of the public in order to prevent traspass and to simplify the administration of the Forest.

Boundary Posters.

In timber the boundary lines should be marked by blazes, as described in the "Instructions for Making Forest Surveys and Maps." Boundary posters with the proper description should be placed at all corners and at intersections with trails, roads, streams, and ridges. The poster should face outward from the Forest, and should state that it marks the east, north, west, or south boundary, according to the specific part of the boundary line upon which it is placed. In openings, where there is no timber upon which the notices can be tacked, posts should be set. The intersection of boundary lines with important roads and trails should be prominently indicated by means of painted signs giving the name of the Forest.

Retracements and Restoration of Corners.

Retracements, including the restoration of lost or obliterated corners and marks, should be made in accordance with the circular of instructions issued by the General Land Office.

Special Surveys.

Where the boundaries can not be located accurately by the regular force the matter of their survey by the Interior Department or by engineers of the Forest Service should be taken up with the District Forester.

Corners and Marks Protected by Law.

Destroying, defacing, changing, or moving any corner, meander post, monument, or bench mark, or cutting down any blazed line or witness tree on any Government line or survey is prohibited by specific act of Congress, and Forest officers should report violations of this law.

Record of Boundary Survey.

When any work in connection with the survey or retracement of boundary lines, or the restoration or referencing of corners, has been performed by a For-

est officer, he will transmit his notes, sketch maps, and report to the supervisor, who will keep a record of all work of this nature on a map, showing the lines retracted, marked, or surveyed, the corners located or restored, and the points supplied with special signs.

MAP MAKING.

Map making in the Forest Service is of two general kinds: From original surveys made by the General Land Office or the Geological Survey, or both; and from reconnaissance, strip surveys, or cruisings made by the Forest Service in connection with the management of the Forests.

The general official name for the data which, with corrections and additions, form the bases for Forest maps, is the Forest Atlas. This is described in the "Instructions for Making Forest Surveys and Maps."

The Forest Atlas.

The *Forest Atlas* at Washington is the central depository for maps, diagrams, statistics, and history of the National Forests and forestry in general throughout the world. Its most important division is that of maps, and the most important maps are those of the National Forests.

The Forest Atlas now comprises 190 volumes, containing *sheets* exactly 18 by 21 inches. They are bound in loose-leaf holders in two ways: *Standard binders* have the binding margin on the 21-inch side, while *township binders* have the binding margin on the 18-inch side. No map is made on a sheet less than 18 by 21 inches, and larger maps are made on two or more sheets, which are always numbered from west to east, beginning at the northwest corner. Borders are omitted. The title consists only of the name of the Forest or the number of the township. The top of the map is always north. A binding edge of at least 1½ inches is always left blank on the west or left-hand side of each sheet.

Scale.

The *standard scale* of the Forest Atlas is 1 inch to 1 mile, and the National Forests practically have been covered by atlas sheets according to this standard. Whenever, in special cases, a larger or smaller scale is necessary for the preparation of any map in the Forest Service, it must sustain the simple relation of $\times 2$ or $\div 2$. Thus the scale may be 2 inches, 4 inches, or 8 inches to 1 mile; or ½ inch, ¼ inch, or ⅛ inch to 1 mile. Under no circumstances will sheets be prepared for the Forest Atlas on the ratio of 3, 5, 7, etc. The scale of *township plats* is 2 inches to 1 mile, because that scale was adopted by the General Land Office, from which the plats were procured

The Atlas sheets which cover a National Forest are called a *folio*, and are assembled, with a *legend page*, in a paper *cover*, on which is printed an *index diagram* showing the number of the sheets.

Before any statement is issued by any branch or office it must be checked against any statements in the Atlas relating to the same subject, and the two must be made to agree. No sheets should be inserted in the Atlas which do not bear, under a given date, the approval by initial of the chief within whose field the data were collected. In Washington this applies to the chiefs of branch, and in the districts to chiefs of office.

District Atlas.

In the office of each District Forester is a *District Atlas* consisting of 20 or more volumes, containing duplicate sheets of the Forest Atlas covering the area of the district. Whenever Forest Atlas folios have been duplicated by photolithography or otherwise for a National Forest, the officers have been supplied with copies, but under no circumstances are copies of any Atlas folio to be sold or given away. They are strictly for the use of Forest officers in the administration of the National Forests. Copies for distribution are not published.

Forest Supervisors are supplied by the property clerk with binders for Forest Atlas folios, having the binding margin on the 21-inch side, and also with binders for land-office township plats, having the binding margin on the 18-inch side.

Corrections.

The folios are the "mother maps" which furnish the bases from which further map making will proceed in the Forest Service. They correspond to the mother maps of other countries in this respect—that they are compiled from official

data upon a standard scale, 1 inch to 1 mile,[1] and upon a uniform legend. They are not always sufficiently accurate for Forest work, and the sheets must, therfore, be corrected whenever new data have been obtained in the field. The manner of correcting sheets is shown on the "Dummy Atlas Sheet," which has been issued to Forest officers. The method is that used by printers in correcting proof. Bold lines should be drawn to the margin of the sheet and explanatory notes written clearly. The marginal note is necessary both to explain and to call attention to the correction, and if properly indicated on the sheet, letters or memorandums telling how it should be corrected will not be necessary.

New Data.

New data obtained by reconnaissance is usually mapped on a scale of 2 inches or 4 inches to 1 mile. Such data should not be redrawn to the standard Atlas scale in the field. The reconnaissance tracings should be sent to Washington with a requisition, Form 988, for photo-reduction. For this and other reasons reconnaissance tracings and other base maps should be drawn with black ink only, and should show only the drainage, contour, culture, and land lines. Other data, such as classification, forest or grazing types, or administration districts, can be shown by appropriate colors upon two or more prints. By this method the tracing remains a record which is subject to very little change, and is not obscured by data which are of special rather than general value. The first reconnaissance of any area should include the drainage and contour, otherwise it will not be possible to "register" a second or supplemental reconnaissance with it.

General Maps.

In accordance with the "Instructions for Making Forest Surveys and Maps," page 71, requests for the compilation and issuance of a Forest map should be submitted to the Forester. There should be no delay in making such requests. If a supervisor has not already been supplied with a satisfactory general map of his Forest, which can be used for administrative purposes, he should submit corrected Atlas sheets or other data, as provided in the instructions, and send them with his recommendation, through the District Forester, to the Forester. This recommendation should specify the kind of data which should be shown or omitted, the scale, and the number of copies required. On the majority of Forests the most satisfactory scale for a *general map* will be one-half inch to 1 mile. If a larger or smaller scale is recommended the reasons should be given.

These general maps, when issued, will serve as base maps upon which may be indicated, by the appropriate colors or symbols, the location of various activities and transactions on the Forests. They should, therefore, so far as practicable, show the land-office surveys, drainage, prominent topographic features, and culture (works of man). The culture should include roads, trails, railroads, telephone lines, towns and settlements, and rangers' headquarters and summer camps. Other desirable data can be shown if within the limitations of the scale. Ordinarily, alienations can be shown best, where the scale is only one-half inch to the mile, by the use of color. If the supervisor requires too many of such maps to warrant their coloring by hand, the alienated areas can be printed, in a transparent tint, upon a portion of the edition, leaving the remainder as a permanent base map.

If a Forest has already been furnished with a *general map* on the half-inch scale and a sufficient amount of corrections and additions have been subsequently made to warrant the issuance of a *revised edition*, these corrections should be indicated upon a copy of the last edition, using red ink and following the method described in the "Instructions for Making Forest Surveys and Maps," and as shown on the "dummy" Atlas sheet. The same procedure should be followed in changing or correcting proclamation diagrams. Correction must be made on the map. Any reasons or explanations may be written, in red, on the margin where the draftsmen and engravers will not fail to see them.

Working-plan Maps.

Accurate base maps on a large scale showing the topography and culture are absolutely essential for the proper and successful management of the tim-

[1] The mother maps of Great Britain and India are on the same scale as the Forest Atlas standard. Those of France, Spain, Italy, Switzerland, and Sweden are nearly the same, 1¼ inches to the mile. Those of Bosnia, Herzegovina, Norway, Bulgaria, Hungary, Russia, and Portugal are on smaller scales; those of Germany, Belgium, Denmark, and the Netherlands are on larger scales

ber and forage, of special uses and settlement, and for the improvement and protection of the Forests. Such maps will be known as *working-plan base maps.* For these a scale of 4 inches to the mile, or even a larger one, may be advisable. On the other hand, a smaller scale may be adopted on maps of large projects, such as fire and water-supply protection plans. The topography will be shown by means of contour lines, intervals between which will be 20, 50, or 100 feet.

Field Surveys.

The field data necessary for the preparation of these maps will be taken from the Geological Survey sheets or the Atlas folios when such maps are sufficiently accurate and from all field surveys by Forest officers.

Such surveys will include examination of claims, and of applications for settlement, special uses and timber sales, and reconnaissance surveys for all purposes when the taking of topographic data is necessary.

In order to insure the necessary degree of accuracy and completeness of the data obtained by such surveys, the District Forester will prepare instructions for standard methods of survey which must be followed by field officers unless specifically exempted by the District Forester Such instructions will conform to the "Instructions for Making Forest Surveys and Maps" and will also contain instructions governing the establishment of horizontal and vertical control (if the standard administrative map has been prepared), the methods of survey, the topographic data to be collected, and its compilation. In the case of large reconnaissance projects on Forests for which the standard administrative map has not been prepared, or wherever there is any doubt as to the control, specific instructions in regard to the control will first be obtained from the Forester. Data resulting from field surveys should not be allowed to accumulate in the files, but should be posted as soon as collected on an original draft of the working-plan map. The field papers containing the data may then be marked "Posted" and filed.

Reconnaissance Surveys.

Great care must be exercised by the District Forester in approving projects for reconnaissance surveys of considerable areas in order that areas in need of such surveys are taken up in the order of their importance. The following order will be observed unless some special conditions prevent:

(1) Large areas which are of value for agriculture and for which applications under the act of June 11 have been received (Land Classification).

(2) Immediately prospective timber sale areas (Timber Reconnaissance).

(3) Areas which have a high fire liability and hazard and are without adequate maps (Protection Survey).

(4) Areas subject to intensive use of forage (Grazing Reconnaissance).

(5) Timber reconnaissance for the purpose of regulating the cut.

A record of the areas covered by standard surveys should be kept by the supervisor on an administrative map. Annually the supervisor should forward to the District Forester a map of his Forest, showing the areas so covered to date, with a statement of the total area and that covered during the previous year.

Special Maps.

Special maps are issued for the use of Forest officers, to illustrate bulletins or circulars of the Forest Service, or as special publications for the dissemination of information which can be best expressed graphically. Such maps are not for general distribution, though some are sold, and they may even be given away under certain circumstances. A general map of a National Forest may be given to a user when it is necessary or convenient to show thereon the lands covered by a transaction.

General maps of the United States, showing the National Forests and related projects and data, unmounted, are sold by the Superintendent of Documents, Washington, D. C., at 50 cents each. A limited number of copies are retained in the Forest Service and furnished in some cases to State officers, State institutions, and libraries, where they will be accessible to the general public.

General continental or regional maps, showing natural forest areas or the distribution of tree species are furnished to State institutions and to some first-class libraries. When more than one copy of a general map is requested, as in the case of forest schools or agricultural colleges, a charge will be made for each extra copy.

Index maps, proclamation diagrams, and diagrammatic maps are treated as publications of the Department of Agriculture, and may be used to answer inquiries which could not be answered satisfactorily in any other manner.

In exceptional cases, as in return for services or courtesies rendered, when a request is made that a map be given to an individual or to an institution not included in those listed, the reason for such a gift should be clearly stated in the request, and should be indorsed or initialed by a Forest officer before being forwarded to the Forester.

Maps Issued by Other Departments.

Proclamations creating or changing National Forests, with diagrams, are issued by the State Department. A limited supply for distribution is kept in the Washington office.

Published quadrangles, showing topography, drainage, and cultivation, are issued by the Geological Survey. Only district foresters may write directly to the Survey for its publications, stating in each letter that the publications requested are strictly for official use.

When advance topographic sheets are prepared in the Geological Survey for an area affecting any National Forest, 12 photographic or 40 lithographic copies are delivered to the Forester. One copy is placed in the Forest Atlas, at Washington, and copies will be sent to the District Forester, and to the supervisor of the Forest affected.

Township Plats.

Township plats are prepared in the General Land Office. Some of them have been reproduced by photolithography, but the greater number are reproduced by photography in the Office of Geography, the original plats being borrowed for that purpose, in accordance with a cooperative agreement between the Forester and the Commissioner. A wet-plate negative is made and three prints are taken from it, which, after being mounted, trimmed, and punched, in accordance with Atlas standards, are placed in the Forest Atlas at Washington, in the District Atlas, and in the office of the supervisor. The negative is then destroyed; additional prints, therefore, can not be furnished, unless they have been specifically requested before the negative is made. Requests for township plats should always be sent to the Forester and should specify the date of the plat, as there are frequently several surveys and plats for a single township.

State maps are issued by the General Land Office. Requests for them should be sent to the Forester.

Charts are issued by the Coast and Geodetic Survey. Requests for them should be sent to the Forester.

PHOTOGRAPHS.

Photograph Laboratory, Washington.

The Office of Geography at Washington is equipped for all classes of photographic work, including wet and dry plates, pictures and map prints, blue prints, Vandykes, enlarged transparencies and bromides, and lantern slides. In cooperation with the Geological Survey, it prepares and prints photomicrographs of wood sections. It prepares originals for illustrations, photographs and wash drawings for halftones, and line drawings for zinc etchings; it makes transfers from map negatives to stone for lithographic proofs; it mounts pictures and maps on cards or muslin.

Requisitions for Photographic Work.

Requisitions (Form 988) on the photographer at Washington for photographs, maps, diagrams, or other graphic records needed for office use in connection with files and records, other than supervisors' albums or to accompany reports, may be initialed by the chief of any branch or office, in Washington or in the districts; and if not more than three prints of any one negative are involved supervisors may make requisition directly upon Washington. When correspondence of a purely routine character is necessary with regard to filling such requisitions, the Branch of Operation may correspond directly with supervisors, without sending copies of the correspondence to the district office.

Supervisors may also requisition directly single copies of maps or diagrams to be placed on the walls of their offices. Requisitions for bromides or transparencies desired for instructive display, whether in offices of supervisors or in the district offices, will be initialed by the District Forester, as will all requisi-

tions for material desired for use in connection with addresses by members of Forest Service or in connection with Forest Service exhibits.

Prints for Official and Personal Use.

Care must be taken to distinguish between photographic material needed for official use and material desired by members of the Forest Service for their personal use. Photographic material for personal use will be supplied to members of the Forest Service only by sale. Photographs which are to be used for illustrating books or articles prepared by members of the Forest Service as individuals should be regarded as for personal use, and the character of this use should be clearly indicated by the requisition. When new photographs are developed, one set will be supplied for the use of the office if requisitioned by the chief of the office, such photographs to be regarded as Forest Service property.

Photographic material may be requisitioned for outside distribution for the following purposes:

(*a*) To cooperators and others from whom aid has been received or by whom courtesies have been extended in furtherance of official work.

(*b*) For use in illustrating material to be published in newspapers or other periodicals.

(*c*) For use in book illustrations.

(*d*) For use in educational work—by lecturers and schools and for exhibit purposes.

Requisitions for photographic material of any kind to be disposed of to cooperators and others who have extended aid or courtesies in the furtherance of official work must be initialed by a chief of office, in the districts or in Washington. Requisitions for photographic material to be given, loaned, or sold for use in illustrating any book, article, or other printed matter, or for use in educational work by lecturers and schools or for exhibit purposes, must be initialed by the District Forester or by a chief of branch, and be approved by the editor. The editor has charge of all work designed to promote general education in forestry by the diffusion of information concerning forests and their best use, through the supply of information to newspapers and other periodicals, through the giving of addresses other than those before audiences of National Forest users with regard to National Forest work, or through exhibits in cooperation with schools other than technical schools of forestry. All requisitions for photographic or art work which will be used to promote general education in forestry must be approved by the editor.

Lantern-Slide Collection.

All exhibit and lantern-slide material owned by the Forest Service, whether in the districts, in Madison, or in Washington, will be considered a part of the Forest Service lantern-slide collection and the Forest Service supply of exhibit material, and will be under the direct jurisdiction of the editor, to whom will be made such periodical reports as may be called for.

Sale of Prints.

The act of March 4, 1907, authorizes the disposal of photographic prints (including bromide enlargements), lantern slides, transparencies, blue prints, and forest maps at cost and 10 per cent additional. Decision as to whether or not material should be sold should be based on the same grounds as decision whether material should be loaned or given away. The object in every case should be to promote the work of the Forest Service or to diffuse information concerning forestry as effectively as possible. Generally speaking, gifts should be restricted to cooperators or persons who have extended aid or courtesies in furtherance of official work; but when a valuable educational result can be attained only if material can be furnished free, gifts may be made, in the discretion of the editor.

Use of Prints to be Stated in Requisition.

The geographer will see, before initialing requisitions for photographic work, that the purpose for which the work is to be used is clearly indicated and that the requisition conforms to the above instructions.

Schedule of Prices.

When material is to be sold it will be according to the following schedule of prices:

PHOTOGRAPHIC PRINTS.

Size.	Unmounted.	Mounted.
4 by 5...each..	$0.06	$0.08
4½ by 6½..do....	.07	.09
5 by 7...do....	.08	.10
6½ by 8½..do....	.11	.14
8 by 10..do....	.17	.20

SOLAR BROMIDE MAPS.

Size of maps.	Unmounted.	Mounted on muslin.
11 by 14..each..	$0.14	$0.20
14 by 17..do....	.17	.25
20 by 24..do....	.21	.34
28 by 34..do....	.39	.58

Lantern slides	each	$0.35
Bromide enlargements	per square inch	.003
Bromide enlargements (sepia)	do	.004
Transparencies	do	.015
Blue prints	per square foot	.04
Vandyke prints	do	.08

Hand coloring will be done on lantern slides at 65 cents each, on bromides at 1 cent per square inch, and on transparencies at 2 cents per square inch.

Substitutes for Defective Prints Sold.

When money is received in advance for photographic work from negatives which may be defective, it can not be returned, because it is deposited with the Treasurer of the United States and is not available for Forest work. Substitutions of equal value can be made, however, from other negatives.

Policy.

The present purposes of the Forest Service in taking photographs are restricted to the following:

(1) *Temporary pictures*, necessary to accompany manuscript reports or furnish evidence.

(2) *Progress pictures*, where the changing conditions at any locality can be best shown by two or more photographs. (This does not mean that pictures should be taken to show the rise and fall of streams or the depth of snow when gauge readings and profiles are the best and most acceptable form of record.)

(3) *Special pictures*, having unusual interest, which may be used as illustrations in bulletins or other publications.

(4) *New pictures*, covering subjects not now in the Service collection. (This does not mean that every new permanent improvement must be photographed, unless it involved some extraordinary feature or difficulty of construction. The author should remember that some view which may be new to him may be quite commonplace in the Service at large.)

The general policy in regard to permanent pictures for the collection is to obtain fewer but better and newer pictures.

IN THE FIELD.

Cameras.

Cameras are nonexpendable property and are issued by the property clerk at Ogden, Utah, on request (Form 668) approved by the District Forester. Cameras should be issued only to competent men, and be used only when necessary. When no longer needed they should be returned to the District Forester or to the property clerk. Unless there are special reasons to the contrary only one camera should be allowed to each Forest.

Films.

Films are nonexpendable property, purchased under contract, and are issued by the Forester on request (Form 988). Care should be used to indicate the

exact size and make of the camera for which films are desired. If films are needed in an emergency for immediate use they may be purchased in the field. Films will be charged to the individual making the requisition or purchase, and will in no case be charged to an office or Forest. When films are purchased in the field the individual making the purchase will include them in his expense account. He will be held responsible for their value if they are not used or turned in before the indicated date of expiration. Exposure of films will be for necessary official use only. Films of useless and irrelevant subjects, or only of personal interest, will be rejected and returned to the author, who will be required to reimburse the Government and to pay the cost of the developing and printing from such films.

Notebooks.

Notebooks (Form 166) are expendable property and are issued by the Forester or District Forester on request or requisition (Form 988). The notebooks must be used to record each exposure and show the purpose for which it was made, and they must be forwarded in the same package with the corresponding films to the Forester. Each author will number the record of each exposure made by him, 1, 2, 3, etc., consecutively, as long as he remains in the Forest Service. Alternate leaves in the notebook are detachable and the author may, therefore, make, detach, and retain carbon copies of the record of each exposure. It is absolutely necessary that the Forester receive the notebook with the exposed films in order to identify them properly. The permanent number will be placed upon the film and notebook by the photographer.

Films Developed and Prints Made in the Field.

Only when needed for immediate use may films be developed and prints made in the field. Even then this should be done, when possible, by a competent photographer under contract at district headquarters. As soon as the prints have been made the developed films and the corresponding notebooks will be forwarded to the Forester. In such cases the films must be correctly numbered with the temporary (author's) number to agree with the numbers in the notebook. These numbers must be written with lead pencil on the margin of the films in such a manner as not to injure them. Prints will be sent to the Forester.

Notice of Purchase of Films.

Authors will notify the Forester when films are purchased in the field, giving the date of purchase, the quantity, kind, and size of films, and the date to which they are guaranteed.

GENERAL.

Spoiled films may be destroyed by the photographer.

When films are returned to Washington, with their corresponding notebooks, they are developed and the results are recorded on the prescribed form on the last page of the notebook. Prints are made from good negatives, which, if recommended by the photographic committee at Washington, are given a permanent number and placed in the Service collection.

All photo-map work must conform to Forest Atlas standards and must not conflict with any of the Instructions for Making Forest Surveys and Maps, except for sufficient reasons, which must be clearly stated.

PUBLICATIONS.

PREPARATION OF OFFICIAL PUBLICATIONS.

Selection of Subjects.

Suggestions of subjects on which publications might advantageously be prepared are welcomed from all members of the Forest Service. Such suggestions when made by members of the Forest force should be transmitted through the supervisor to the District Forester. If the subject relates to investigative work or involves the compilation of data it will be referred to the district investigative committee. If it relates to administrative work, and the suggestion is approved by the District Forester, authorization may be sought from the Forester for preparing the proposed publication. Copies of letters requesting such authorization should be sent to the other District Foresters. These letters should indicate the general character and scope of the publication proposed, by

means of a brief provisional outline, and the name of the proposed author or authors. Authorization for preparing publications along scientific lines will be given through approval of the project as provided for in the chapter relating to the investigative committees.

The practicability of assigning the preparation of publications to the persons first suggesting them will be carefully considered by the District Forester. First consideration, however, must in all cases be given to the man who can do the work best, or who is most available for it.

Preparation of Manuscripts.

Authors should seek to put their publications or reports into the best possible form, and to make them complete in every detail, including table of contents and list of illustrations, before submitting them.

Publication Credits.

A proper assignment of credits to different men whose work contributes to any publication is often difficult. Many publications are prepared by men who utilize data derived from studies and reports of other men. In some cases the final work may be merely the compiling of results which are in the files; in other cases the author will use these data as a basis for an elaborated study; in others again he will use data gathered by others to supplement his own original researches. There will also be difficulties due to contributions of short or long passages covering points which need to be handled by some specialist, or in some branch other than the originating one; additions supplied by superior administrative officers, editors, and others; and criticisms so valuable as materially to raise the character of the publication. In short, many publications will be a composite of the work of many men.

The following is a statement of the general policy to be applied in the matter of credits:

(1) Publications embody primarily the work of the Forest Service, not of individuals. The views expressed must have the approval of the Forester, in order to be published. Statements are generally accepted as resting on the authority of the Forest Service, not of the man whose name appears on the title-page. If the work is faulty, the Forest Service is held responsible.

(2) Results which have been gathered by individuals belong not to the individual but to the Forest Service. No one has a right to demand that his results shall be used with reference to his personal glorification, if the best interests of the Forest Service call for their use without the giving of credit.

(3) The Forester has a right to expect all members of the Service to contribute willingly and to any extent toward making any and all publications as good as possible, without expectation of personal credit, whenever the presentation of the subject matter of the publication in the best form (i. e., in the form which will secure the best results) will be interfered with by the giving of such credit.

(4) It is, however, desirable, from the standpoint of efficiency of publications as well as of fair treatment of those who prepare or contribute toward Service publications, that, within reasonable limits, credit should be given to each man for his own work. The giving of proper credits is a stimulus to good work; and it is also an advantage to the Forest Service to increase the reputation and scientific standing of its members.

(5) Especially it is highly demoralizing to permit one man's reputation to be increased at the expense of that of another man who sees credit for important work given to some one else.

(6) It is important that publications should, just as far as possible, appear as the work of an author or authors. This means that the principal credit must necessarily go to not more than two men.

(7) The man who has actually put the most into the publication should have principal credit for it. This may or may not be the man whose field work furnished the data. When the digesting of raw material constitutes the principal scientific contribution to the publication, the man who does the digesting should have the principal credit. On the other hand, when one man merely puts into shape for publication material which has been thoroughly and satisfactorily worked up by others, he is the editor or compiler, not the originator. In such cases he should at most not appear as more than the junior partner in the work.

(8) Administrative responsibility for work includes an obligation to see that the material prepared for publication is as well prepared as possible. Supervision of work, though it may actually make suitable for publication the com-

pleted report, does not entitle the one supervising the work to assume credit as the author.

(9) When a man undertakes a publication concerning work of which he has charge, the necessity of acknowledgments to those who have either assisted in gathering the data or contributed to the writing of the work under his direction is a matter of administrative judgment. It would be absurd for the chief of a field party conducting an investigation to feel it incumbent upon him to name all the members of the party and state what measurements had been taken by each; and the good of the Service often requires that one man should prepare matter for another man to use as though it were his own. On the other hand, the holding of a superior position does not entitle any one to take credit for another man's work. The deciding principle must be the good of the Service, before which every personal consideration must give way.

(10) When publications combine the original work of several different men, no one of whom can, in fairness to the others, be recognized as the principal contributor to the completed study, one of two courses may be followed:

(*a*) If there is a compiler who has contributed in an important degree to the working up of the final conclusions, he may be recognized as the author; but the first paragraph of the bulletin should be an apportionment of credit indicating what is, in the judgment of the administrative officer in immediate charge of the work, the relative share of credit which belongs to the compiler and to the various persons whose results are utilized.

(*b*) If the compiler's share in the work is, in the judgment of the administrative officer in charge, relatively subordinate, it is manifestly an injustice to the others concerned to permit the compiler's name to appear on the title-page without their own names. In such cases it would be better not to put any name on the title-page, but to apportion the credit in the opening paragraph of the publication.

(11) Minor contributions, either in the form of footnotes or of short passages for insertion in the body of the text, consisting of discussions of technical points falling within the field of a branch or office other than that in which the publication originates, should generally be given freely without the expectation of credit. The Service can not follow the same method which the author of an outside publication would in giving credit to every one who had rendered any assistance. Nevertheless in some cases acknowledgment for even a small contribution which is essentially original work may properly be made. It is believed impossible to lay down a hard and fast rule. Much will depend on the context. On the one hand, matter should be furnished cheerfully without stickling for acknowledgment. On the other hand, if the effectiveness of presentation of the subject matter is not interfered with by the giving of credit, such credit may be given.

(12) In general it is better for authors in preparing manuscripts to give too many credits than too few. The past usage has, on the whole, erred on the side of too little consideration of what might be done to acknowledge assistance received. The editing of publications will, however, include taking into consideration whether the acknowledgment made by the author should stand. In case of the failure of the editor and the author or person given credit by the author to agree, after consultation with the chief of the originating branch, the point at issue may be laid before the Forester.

To sum up: It is desirable to give credit for original work, in so far as this is possible without detracting from the value of the publication through minute or excessive acknowledgments or interruptions of the continuity of presentation.

Review of Manuscripts.

Manuscripts intended for publication which originate in a district office will not be transmitted by the District Forester to the Forester until they have been carefully reviewed in the district office and are approved by the District Forester as complete and satisfactory. They should then be submitted to the Forester. If approved by the chief of branch, they will be submitted to the editor for final review. When submitted to the editor they must be accompanied by the necessary illustrations, tables, and diagrams, and must bear the initials of the chief of branch, as well as those of the District Forester (if they originated in a district office), the chief of office, and the author. Manuscripts will be taken up for review in the order in which they are received and registered. Chiefs of branch may at any time make changes in the order in which manuscripts originating in their respective branches shall be taken up, but only by direction of the Forester shall any manuscript of one branch be given precedence over that of another which was registered earlier.

Manuscripts will be reviewed by the editor both for their technical accuracy and their literary form. When a manuscript has been edited it will be submitted to the chief of branch concerned for his approval. In case of disagreement between the editor and chief of branch concerning the desirability of suggested changes the question as to whether the changes shall stand will be referred to the Forester for final decision.

After a manuscript has been transmitted for publication by the Forester the responsibility of putting it through the press will rest solely upon the editor, who will deal directly with the Division of Publications. He will submit first proof to the chief of branch, who, if he thinks it desirable, will transmit the proof to the author. The editor, in revising proof, will make no change which involves technical questions without the approval of the chief of branch.

DISTRIBUTION OF PUBLICATIONS.

The following instructions with regard to the distribution of publications are supplementary to those given on page 33 of the section of the National Forest Manual relating to Forest plans under "Libraries."

Departmental Special Order of December 8, 1908, reads in part as follows:

> The Division of Publications is charged with the mailing of all publications, the chief of that division having been designated to have supervision of such distribution under the provisions of section 92 of the law of January 12, 1895, and that he is required to report thereon. Consequently, when the chiefs of bureaus desire publications mailed out they must send orders therefor, leaving the actual mailing to be done in the document section of the Division of Publications; and no mailing shall be done by the bureaus, divisions, and offices. The only exception to the above is when it is desired to send a marked copy referred to in a letter or to hand a copy to a visitor.

Supplies of publications which are intended for distribution to the Forest force, and also of publications which supervisors should have for use in office interviews and in correspondence with the public, will be sent to supervisors directly from Washington, with notification from Washington to the District Foresters of the action taken.

Each Field Program will list all publications issued during the preceding quarter. Requests for any of these publications, or for any other publications, either of the Forest Service or of any other bureau of the Department of Agriculture, desired by any Forest officer for his individual use should be submitted to the forest supervisor and filled by him if he has an available supply. If he has not, the request should be transmitted by the forest supervisor, with indication of his approval, directly to the Forester. Publications thus requested, or a notification that they are not obtainable, will be sent directly from Washington to the officer who makes the original request.

FIELD PROGRAM.

The Field Program is issued from Washington on the 15th day of January, April, July, and October. Material intended for the Field Program will be forwarded from district offices in time to reach Washington not later than the 2d of the month of issue.

A sufficient number of Field Programs, in envelopes, will be sent to each supervisor to supply all officers on his Forest. Immediately upon their receipt the supervisor will have the envelopes addressed and sent to officers on the Forest. Sufficient Field Programs, not in envelopes, will be sent to District Foresters for immediate distribution to district offices. Changes in the number to be sent any supervisor will be indicated by him to the Forester.

EDUCATIONAL ACTIVITIES.

Information for the Press.

General Order 138 of the Department of Agriculture prescribes in part as follows:

> The publicity work of the department will, in every detail, be approved by the chief of the bureau, office, or division interested, and be submitted to the Secretary of Agriculture before publication.

This order relates both to material prepared for distribution to a mailing list of newspapers and newspaper writers, and to articles officially prepared for publication in a single newspaper. It does not prohibit district foresters and supervisors from furnishing information which may be sought by newspaper men for immediate use concerning Forest Service work; in other words, such information as would properly be furnished anyone asking for it is not to be refused newspaper men. Information should not be furnished concerning matters pending before the Secretary or the Forester for decision or which might develop differences of a controversial nature between the Forest Service and any other bureau or department of the Government.

It is desirable that all proper opportunities should be afforded the public to understand the work of the Service and the principles and application of forestry. Controversy, self-advertisement, and partisan discussion of questions of policy must, however, always be avoided, as well as criticisms of any other bureau or department of the Government. Both district foresters and supervisors should be accessible to newspaper men and respond to legitimate demands for information, while exercising discretion and tactfulness in furnishing information.

Because of the necessity which often exists to furnish information in the districts regarding matters on which the public should be rightly informed without the delay which would be involved in submitting material to Washington for approval, the Secretary of Agriculture has authorized the district foresters to furnish statements for newspaper use when in their judgment delay would be detrimental to the interests of the Forest Service.

Material for Technical and Other Periodical Publications.

All articles written by members of the Forest Service as individuals for any periodical must be submitted to the Forester before they are offered for publication.

Addresses.

General Order No. 135 of the Department of Agriculture provides as follows:

> Before incurring any expense, salary, or otherwise, in connection with attendance upon any conventions or meetings of associations of any kind, officers and employees of the Department of Agriculture must in each case obtain in advance specific authority from the Secretary.

Subsequent to this order the Secretary of Agriculture granted authority to the district foresters to authorize informal addresses before local commercial clubs, granger societies, or other small or unadvertised meetings when the request is received too late to permit application by letter to Washington. In the case of important meetings, conventions, and, in general, occasions which involve formal participation by the Forest Service or which involve anything more than an incidental expenditure of time and money, a specific authorization of attendance must be obtained from the Secretary of Agriculture, through the Forester.

The Secretary of Agriculture has also authorized the attendance of one representative of the Forest Service at meetings of Forest users when these do not constitute gatherings of an organization, and at meetings of stock associations when attendance is for the purpose of transacting National Forest business, without securing special permission in advance.

Letters requesting the authorization of the Secretary for attendance at meetings by members of the Service will be prepared and filed in the Office of the Editor, which will keep a record of addresses made at all meetings by members of the Forest Service, except meetings of Forest users and stock associations which Forest officers may attend for the purpose of transacting National Forest business. All persons making addresses other than those covered by the above exception will, immediately after the meeting, submit a report (Form 329) to the Forester, through the District Forester or chief of branch, stating the character of the meeting, approximate attendance, the results believed to have been secured, and other matters of a similar nature.

PROTECTION FROM FIRE.

Need for Protection.

Practically all of the resources of the National Forests are subject to severe injury, or even to entire destruction, by fire. Besides the diect damage which fire may do to merchantable timber, to the forage crop, and to watershed cover,

it may nullify all attempts at the practice of forest management, such as the regulation of cutting to insure a second crop of timber, the planting of denuded areas, and the restriction of grazing to assist regeneration.

There is probably no other forest area where the danger of fire is greater than on the National Forests. This is due to their comparative inaccessibility, to climatic conditions, to the sparseness of population, and to the constant use of fire in the daily life of the people and in the industries.

The protection of the Forests from fire is, therefore, of paramount importance, and the most careful and systematic study must be given to the problem of affording the greatest protection at the lowest cost.

What Governs Protection.

Fire protection involves a consideration of (1) the fire liability or the damage which may result; (2) the fire hazard or the degree to which the forest is subject to fire danger; (3) the difficulty and cost of prevention and control.

METHODS OF FIRE PROTECTION.

Measures for Protection.

Measures for fire prevention and control may be grouped under four heads: (1) Those to lessen the fire liability; (2) those to reduce the fire hazard; (3) those to decrease the cost and difficulty of discovering and controlling fires; and (4) those to secure promptness and efficiency in actual fire fighting.

Under the first head would be included the disposal of valuable timber exposed to very great fire hazard; under the second, the encouragement of grazing to remove inflammable undergrowth or to keep down grass and the removal of slash or brush piles; also the education of the public in the safe use or avoidance of fire, the enforcement of preventive laws and regulations, and the general surrounding of the use and occupancy of the Forests with proper safeguards. The third classification should include the construction of complete systems of communication, transportation, lookouts, and firebreaks; the preparation of accurate maps to show the conditions which affect the fire problem; and the apportionment of equipment and supplies. The fourth classification covers agreements with other organizations or industries which would be involved in fire losses, to report and extinguish fires which they discover; also the employment or assignment of men for patrol duty and arrangements to secure labor, supplies, and equipment in anticipation of fire fighting.

THE FIRE PLAN.

To insure the adoption of every practicable means for protecting the forest property from fire, a systematic study of the conditions on every Forest is necessary. The complete fire plan resulting from this study is simply a description of the fire liability and hazard and of every means which have been or may be taken to meet any emergency which may arise. The fire plan will be prepared by the supervisor and in the light of experience will be modified and strengthened at the close of each fire season.

It is impossible to prepare one standard plan which will meet the local conditions on all National Forests. Therefore the instructions which follow should serve only as a general guide to the supervisors, who should have the widest latitude in developing the details of the plan to meet their peculiar needs.

Maximum Efficiency with Minimum Expense.

No supervisor should consider his fire plan complete until he has considered every possible means by which the fire liability and hazard and the cost and difficulty of suppression may be reduced, or until he has evolved a system which will, at the minimum expense, afford the maximum protection which the conditions demand.

Collection of Information.

Complete information is a prerequisite to the formulation of a perfect fire plan. This information will not be obtained until the entire Forest has been covered by intensive reconnaissance; and since it will be many years before this information will be fully available, the first draft of the fire plan must be prepared from such maps and data as are at hand.

Maps.

Of first importance is a topographic map which shows accurately the cover and cultivation; means of communication and transportation; location of settle-

ments, sources of supply for labor, equipment, food, and forage; and location of camping grounds, lookout stations, and firebreaks.

Special Protective Surveys.

On those Forests which have an extremely high liability, and of which the existing maps are very inaccurate, the project of a protective survey should be considered. Such a survey should aim to produce merely an accurate topographic map with a delineation of the types of cover and a rough estimate of the timber. Ordinarily a survey should not be undertaken for this purpose alone if its cost will exceed 1 cent per acre.

Statistical Information.

The fire-protection map should be supplemented by statistics by ranger districts, giving an appraisal of the liability, the degree of hazard, and the liability insurance (or the amount of money which may properly be expended for fire protection) based on the value of the property to be protected.

THE FIRE LIABILITY.

The amount of money which may properly be expended on protection naturally is determined by the amount of damage which fire may inflict, and this damage is, in turn, dependent on the character and value of the forest cover. Therefore the fire liability of each type of forest should be determined as accurately as possible by means of a study of the results of previous fires. Damage may include the actual loss of merchantable or potentially merchantable timber; of forage; of protective value; or in the reduction of the productiveness of the land. Ordinarily, the liability should be expressed definitely in terms of money.

Reduction of Liability.

The study of the fire liability should include the determination of the location and amount of merchantable timber in burns, or in isolated bodies, which are so situated that successful protection is practically out of the question. The sale of such bodies of timber should be carefully considered.

THE FIRE HAZARD.

The fire hazard depends upon the inflammability of the forest cover and upon the degree to which it is subject to the chance of ignition. The hazard of different types of forest can be measured only in terms of relative risk, such as high, moderate, and low. The determination of this risk will involve a study of the history of fires on the Forests, with particular reference to their causes and frequency and to the forest's inflammability.

Reduction of Hazard.

Measures to reduce the fire hazard will include the grazing of areas not now grazed, the removal of combustible material from camping sites and other areas of great hazard, the burning of slashings or old burns at safe seasons, the use of oil as fuel and of spark arresters on locomotives and other engines, and the adoption of silvical methods which will help to keep the forest free of combustible material.

PREVENTION AND CONTROL.

The methods and the cost and difficulty of extinguishing a fire varies not only with the type of cover, but with the kind of fire. Thus in regions where fires are easy to extinguish and do but little damage there will be required protective measures which will differ from those for forests which are subject to complete destruction and in which fires are extremely difficult to control. A careful study must therefore be made of the relative cost and difficulties of fire control in the different types of forest.

Transportation and Communication.

The costs and difficulties of prevention and control will depend also upon means of transportation and communication. An adequate system of roads and trails and means of communication between lookouts, patrol stations, and the headquarters of rangers and the supervisor is of utmost importance.

These subjects are treated in detail in the Improvement section of the Manual.

Firebreaks.

Firebreaks greatly reduce the hazard and the cost of prevention and control. Their absolute value is not as yet wholly determined for the United

States, but they are widely used in European forests. It is evident that a most careful investigation must be made to determine what their character should be and what is their utility in proportion to their cost.

Classes of Firebreaks.

In general, firebreaks fall into three divisions: First, topographic; second, isolating; and third, divisional. The topographic are those on ridges, along contour lines, at the base of slopes, and along streams. Nearly always they serve also as means of travel and become part of a permanent system of roads and trails. There is no question as to the utility of this type. Isolating firebreaks take advantage of the difference in liability and hazard of the forest cover and aim to segregate certain areas. Divisonal firebreaks are constructed more or less arbitrarily through large areas of similar cover and regular topography. Their purpose is merely to subdivide the area and afford smaller units within which the fire may be restricted.

Character of Firebreaks.

Firebreaks may differ also in character. In many cases mere trails or plowfurrows are sufficient, as in open yellow pine forests. Again, the removal of combustible material from a strip 5 to 10 feet wide and brush for a farther distance up to 50 feet on each side may be necessary. Sometimes also the felling of dead trees for a distance of from 100 to 300 feet on each side of the cleared strip will help to reduce the hazard and to insure the success of measures of control.

Maps.

Maps are required in the preparation of a firebreak system. They should show types of cover, lines of travel, and the location of natural fire barriers, such as water, landslides, glades, meadows, heavily grazed or barren areas, and cliffs, together with the proposed system of firebreaks.

Construction.

The construction of firebreaks will be handled in the same manner as other improvement projects. In recommending a firebreak a detailed report should be made showing cost, character, and utility not only for fire control, but as a means of travel. The estimates of cost should include expense of maintenance.

Lookout System.

Lookout points are of great value in discovering and locating fires, and on those Forests on which an extensive system of protection is to be adopted a complete system of lookouts is essential. Their establishment will depend on careful selection in the field and the preparation of a map which shows the area which can be controlled from each. Three kinds of lookouts should be distinguished—route, special, and main. Route lookouts are those from which a view over considerable territory can be obtained without leaving regular lines of travel. Special lookouts are those not on regular routes of travel, but which afford such a good view that their occasional use warrants their improvement. Main lookouts are those from which an exceptionally large territory can be seen and where it might pay to keep a permanent lookout.

Prevention.

Since the best way to stop fires is to prevent them, a fire plan must include a careful study of prevention methods. The development of a strong public sentiment against fires is of first importance. This may be fostered by public meetings, by the distribution of pamphlets, by news items in local papers, by explanations of fire policy to forest users and campers, and by instruction in the schools. The forest supervisor should issue detailed directions for the posting of fire warnings and other notices provided by the property clerk, and should adopt measures to prevent and detect incendiarism, and to insure the enforcement of State and Federal laws in regard to the use of fire by campers and ranchers and by those in charge of logging and railroad engines.

Cooperation.

Efforts should be made to arrange definite cooperation with timber owners or associations of timber owners, with States, with departments of the Federal Government, and with railroads and other industrial concerns that may either suffer from fire or constitute a source of fire danger. When the need of cooperation is evident the facts should be fully investigated and reported to the District Forester, by whom the agreement will be prepared. All formal agreements must be forwarded to the Forester (Reg. G. A. 7).

Protective Stipulations.

The use of Forest resources should be surrounded with all reasonable precautions against fire. All applications for timber, grazing, and special use should be scrutinized with this point in view; necessary stipulations against the setting of fires should be inserted in all contracts or permits.

No opportunity should be lost in getting the cooperation of permittees to assist the regular force in preventing, reporting, and suppressing fires. As far as payment for labor is concerned, the general policy to be followed in such cases is to pay permittees for services rendered in connection with fires which do not arise from their carelessness or from the use granted by the terms of their permit or contract. When, however, fires will seriously affect or permanently prevent the enjoyment of the use granted the permittees, they may reasonably be expected to furnish a certain amount of assistance free of charge; and the supervisors will take this fact into consideration in deciding the extent to which the permittees should be paid for services rendered in fire fighting.

Equipment.

Every Forest officer should know the amount and location of all fire-fighting equipment; implements, camp outfits at each station, tool houses and boxes on the Forest. To be sure of this there should be an annual inventory; if the inventory shows an insufficient supply of fire-fighting equipment, the deficiency should be made good at once.

Transportation and Supplies.

In addition to the inventory there should be lists of ranchers, liverymen, garages, and logging camps from which equipment and means of transportation can be obtained, and one of ranches and stores from which provisions, hay, and grain can be obtained promptly. Wherever possible definite estimates should be secured and tentative arrangements made before the fire season begins for such transportation and supplies as might be needed in case of fire. When such provision can not be made the purchase of pack trains, teams, and wagons or auto trucks should be considered. Permission for such purchases must be obtained from the District Forester.

Foremen.

To be forehanded the whole country in the vicinity of the Forests should be canvassed for experienced men who are capable of handling fire-fighting crews. When such men are found, terms of employment should be agreed upon and definite instructions given for action in case of fire.

Labor for Fighting Fire.

Forest officers will secure the addresses and telephone numbers of ranches, logging camps, mills, and power plants, from which labor may be obtained, and the amount and character of such labor; also, if possible, terms of employment should be arranged for in advance.

Location and Addresses of Forest Officers and Fire Wardens.

There should also be a list of the names, location, post-office addresses, and telephone numbers of all officers on the Forest and on adjoining Forests, the names of State and county fire wardens, of United States commissioners and road supervisors, and of officers of private fire associations.

Slash Burning.

It should be ascertained beforehand what ranchmen and loggers expect to burn slashings during the season, and, if possible, protective plans should be arranged.

Fire Fighting.

In fire fighting three kinds of fires may be distinguished: (1) Those which can be attacked directly—that is, smothered or beaten out; (2) those which can be attacked only by indirect methods, such as firebreaks, back firing, and the use of water or chemicals; and (3) those whose size, swiftness, and intensity render an attack wholly impracticable. In the last instance the things to be done are to determine the probable course and development of the fire, and then to take advantage of any lull which is likely to follow when the fire meets less combustible material, topographic barriers, wind changes, or rain.

Detailed Instructions.

Detailed instructions will have to be prepared by supervisors for each type of forest. These instructions should take into consideration, besides the in-

flammability of the cover, the topography, atmospheric conditions, labor and its pay, tools and equipment, subsistence, transportation, and communication.

Organization.

If a Forest is not liable to heavy damage from fire, and there is but little difficulty and low cost in fire protection, the regular Forest force can be depended upon to prevent and discover fires. However, provision should be made in advance for supplementing the regular force by outside labor, and for supplies and transportation in anticipation of possible fires beyond the control of the regular force. Forests which are liable to almost complete dstruction, and in which fires are extremely difficult to extinguish, need more intensive handling. This generally means not only the preparation for extra help, but the actual employment of special patrolmen for limited areas, the aim being to prevent fires and to discover and extinguish them at their inception.

Season of Low Hazard.

On all but a few Forests the regular force can handle the fire situation, except during the summer months. Except in this summer season, therefore, precautions for fire prevention and control involves only measures to insure the availability of equipment, labor, and supplies required for fire fighting, should a fire occur.

Season of High Hazard.

In summer, when the situation can not be handled by the regular force, even with the cooperation of local residents and industries, additional assistance is necessary. Extra men will be supervised by the regular force, except possibly when they are specially experienced in firework. The supervisor will determine the number and assignments of the extra force. The period of employment, and cost in wages and expenses, and other details will be given in the fire plan, and the routes or stations of the extra men will be shown on the accompanying map.

Supervision and Direction.

The district ranger will, if necessary, call on reconnaissance or improvement crews, and any officers engaged in field work in his district, to assist in emergencies in patrol work and in fire fighting.

Assistants to District Ranger.

Careful consideration should be given to the need of furnishing rangers, in charge of districts which have high liability and hazard, with men specially qualified in fire work.

Patrolmen.

As far as possible local residents should constitute a regular part of the patrol force. They may be employed as per diem guards or laborers; by this arrangement they will receive pay for services actually performed, or they may be employed as guards at salaries commensurate with the value of their services. When there is need, and where sufficiently effective patrol can not be obtained by such means, the employment of guards and laborers who will give all their time to patrol must be resorted to.

Instructions as to Duties.

When a patrolman or lookout man is placed on duty he should be furnished with complete information as to the district to which he is assigned, including a map showing the topography, routes of travel and communication, and other necessary data. He must be instructed in detail as to his duties. If the patrolman is not already familiar with the country, he should be assigned to duty sufficiently in advance of the danger season to enable him to become familiar with his district.

Control.

The district ranger will insure compliance with his instructions by personal inspection or by keeping in touch with the patrolmen by means of telephone. If, because of weather conditions, the fire danger becomes small, the district ranger will require the patrolman to engage on improvements and other work, which should be planned in advance.

Action on Discovery of Fires.

The first duty of the Forest officer discovering a fire is to determine its location and extent, its possible spread, and the amount of work required to extinguish it. An officer should be sufficiently familiar with conditions to determine,

even when he discovers a fire at a distance or when one is reported to him, what measures will probably be necessary to extinguish it. If there is a good chance that he can put out the fire alone, he should exert every effort to do so. If, however, it seems probable that he will be unable to extinguish it by his individual efforts, he should, if possible, decide at once on the number of men needed, select a good camping site, and then get immediate help, reporting the facts to the proper officer.

Fire Fighting.

The collection of men and supplies, their transportation to the fire, the establishment of camp, the arrangements for the preparation and distribution of food and drinking water, the organization of the crews, the attack on the fire, the timekeeping and the payment of the men, and precautions to prevent injuries should follow specific instructions given in the fire plan.

Reports.

The officer in charge of a fire should submit promptly a report of the fire on Form 874–6. For severe fires a special detailed report and map should be made. In reporting fires the following classes should be distinguished: (*a*) Small fires which burn not more than one-fourth acre; (*b*) fires which burn over more than one-fourth acre but not more than 10 acres; (*c*) fires which burn over more than 10 acres. This last class should be subdivided further: (*c–1*) Fires that inflict damage amounting to less than $100; (*c–2*) fires that do more than $100 worth of damage but less than $1,000; (*c–3*) fires that inflict damage to an amount greater than $1,000.

The supervisor's annual fire report, upon which the District Forester's report is based, is made on Form 926, which contains full instructions for its proper preparation.

PROTECTION OF WATER SUPPLY.

Importance of Protection.

Undoubtedly the greatest value of the mountain ranges of the West, most of which are within National Forests, lies in their influence upon the regularity of the water supply. In many of the States the mountains afford the only water supply for domestic use, for irrigation, and for the development of power. The future development of the entire region, therefore, will depend upon the amount of water and the manner in which it flows from the mountains.

Climatic conditions and geologic and physiographic formations are undoubtedly the principal factors which govern the precipitation and run-off, yet it has been proved that the vegetative covering has a very decided influence on run-off and probably a slight influence on precipitation. For this reason Congress made the preservation of conditions favorable to streamflows one of the principal objects to be sought in the establishment and administration of the National Forests.

Use of Forest Resources When Not Injurious to Protective Cover.

The preservation of the vegetative cover or its restoration, where it has been destroyed, will undoubtedly insure the conditions most favorable to an equable streamflow. Experience has shown that the value of the protective cover can be preserved by judicial use of both the timber and forage on the watersheds. The policy of the Service is, therefore, not to deny the use of any resource of the National Forests, except when it can be conclusively proved that such use will be injurious to the public interests.

Water Protection Plan.

In order to follow a definite and consistent policy with respect to the restriction of the use of the Forest resources for the purpose of protecting the water supplies, complete information must be collected as to the sources, the amount and use of water arising in the National Forests, the present condition of the vegetative cover on the watersheds as to its influence on run-off, and the special measures necessary to maintain the protective value of the cover. This information will be presented in the form of a definite water protection plan. This will include an administrative map and a report.

Map.

The administrative map will show the watersheds that supply water for municipal and domestic use, for irrigation, and for the development of hydroelectric power. It will include the location of ditches, canals, flumes, dams,

power plants, and other works; also the streams subject to disastrous floods and the settlements, mines, railroads, or other works in need of protection from snowslides.

Report.

The report will accompany the map of each important watershed and will cover the amount of water, the purpose for and extent to which it is used at the present time, the probable future use, the condition of the cover, and the special protective measures which are at present in force, with definite recommendations of measures which will be needed to meet future demands. Special protective measures include restriction of grazing, special uses, and settlement; possible modifications of lumbering, reforestation and range improvement, the appointment of extra patrolmen, and the construction of works for the prevention of fires, floods, snowslides, and the contamination of the water. The losses of revenue due to restricted uses and to the cost of extra men and works should be calculated.

The District Forester will forward a summary of the report to the Forester, together with his recommendations. The plan should be revised annually by the supervisor.

PROCEDURE.

Stipulations in Permits and Contracts.

It shall be the duty of every Forest officer before granting a permit for any use of the National Forests to consider its effect on the water supply, and when necessary to incorporate in the permit or contract stipulations which will afford protection from possible injury.

Cooperative Agreements.

To insure the sufficiency and purity of the water supply of a municipality or of an irrigation district, or to prevent floods and snowslides, the use of watersheds for grazing, timber, special uses, or settlement will be specially restricted by the Secretary when such restriction is necessary (Reg. G. A. 8). Applications for such restrictions should be made to the forest supervisor by city authorities or by petition of associations or interested citizens. The supervisor will submit a complete report upon the application, paying particular attention to the need and reasonableness of the restrictive measures requested, and the effect which the proposed restrictions will have upon established industries. The loss of revenue which will result from the restrictions should also be reported.

If the applicants do not desire a specific agreement, the District Forester may, if he considers the restrictions justifiable, issue the necessary instructions to the supervisor. If, however, the District Forester considers the proposed restrictions unjustifiable, he will forward the papers to the Forester, with a full report of his reasons for not granting the request.

When the applicants desire a definite agreement the District Forester will forward all papers and his report to the Forester. All agreements for restriction in the use of Forest resources to protect water supplies will be signed by the Secretary.

If special protective measures, such as the construction of fences, firebreaks, or other works, or the appointment of additional patrolmen, will be required, a stipulation should be inserted in the agreement defining the assistance to be given by the parties benefiting from the restriction of use.

The agreements should be prepared in quadruplicate, in accordance with the accompanying sample form. After execution by the Secretary and the proper representative of the applicants the original will be filed in the Washington office, and one copy each will be furnished to the applicants, the District Forester, and the supervisor.

Form of Agreement.

UNITED STATES DEPARTMENT OF AGRICULTURE.

OFFICE OF THE SECRETARY.

COOPERATIVE AGREEMENT FOR THE PURPOSE OF CONSERVING AND PROTECTING THE WATER SUPPLY OF _____.

THIS AGREEMENT, made and entered into this _____ day of _____, one thousand nine hundred and _____, by and between _____, of

_____, State of _____, through _____,
its mayor,[1] and the UNITED STATES DEPARTMENT OF AGRICULTURE, through _____
_____, Secretary of Agriculture, WITNESSETH THAT—

WHEREAS, The following described lands _____
_____
comprising _____ acres, more or less, within the boundaries of the _____
_____ National Forest, form a part of the watershed from which the water supply of the said city is obtained.

NOW, THEREFORE, for the purpose of conserving and protecting the water supply of the said city the Secretary of Agriculture agrees:

FIRST. That the use of said lands will not be permitted without the approval of the proper city authorities, except for the following purposes, to wit: Measures necessary for the proper protection and care of the Forests; the marking, cutting, and disposition of such timber as, in the judgment of the Forest officers, may be removed without injury to the water supply of said city; for the construction of roads, trails, telephone lines, and other means of transportation and communication not inconsistent with the object of this agreement; and for rights of way acquired under acts of Congress.

SECOND. That all persons employed on or occupying any of these lands for any purpose will be required to comply with the regulations governing National Forests, and to observe such sanitary regulations as may be proposed by the said city and approved by the Secretary of Agriculture.

THIRD. That, so far as practicable with the means at his disposal, the Secretary of Agriculture will extend and improve the forests upon these lands by seeding and planting and by the most approved methods of silviculture and forest management.

AND THE _____ FOR THE CITY OF _____
AGREES: That the said city will cooperate with the Forest Service in patroling the above-described lands for the enforcement of the regulations and the prevention and supression of forest fires; and that the additional guards rendered necessary by this agreement shall be appointed by and be directly responsible to the supervisor of the _____ National Forest, but their compensation will be paid by the said city.

The undersigned agree to the above propositions and agree to carry them out as far as they have official power and authority to do so.

City of _____,
By _____.
(Mayor.)

Attest:

_____.
(City Clerk.)

Witness:

_____,
Secretary of Agriculture.

Instructions to Carry Out Terms of Agreements.

When restrictive measures have been agreed upon between the Forest Service and municipalities or other applicants, the District Forester will issue definite instructions to the supervisor in regard to the manner in which the restrictive or protective measures will be put into effect. Record of restrictive measures should be kept on a map in both the District Forester's and the supervisor's offices.

PROTECTION OF THE PUBLIC HEALTH.

Every precaution must be taken by Forest officers to protect the public health. Regulation T–4–D provides that all persons on National Forest lands shall be liable to trespass proceedings if insanitary conditions result from their presence, and it is the duty of Forest officers to themselves conform to the provisions of this regulation and to enforce compliance with it by all campers, stockmen, permittees, and other persons traveling through or occupying National Forest lands.

All camp refuse and débris must be disposed of by burying or burning, and in large or permanent camps disinfectants should be used. The carcasses of all dead animals, when they are a menace to the public health, should be immediately burned or buried. (See Regulation G–25.)

[1] Resolutions of city council or governing authority of the city authorizing the signing of this agreement by the mayor should accompany the agreement.

The supervisor should see that the notice warning the public of this regulation is posted at the entrances to the Forests and at all camping grounds and at other suitable places.

When a Forest officer discovers insanitary conditions he will first request the trespasser to comply with the regulation, and if the trespasser refuses will take the necessary action to remove the nuisance and then follow the usual procedure for trespass cases.

FOREST PRODUCTS.

ORGANIZATION.

The aim of the Branch of Products is to promote the economical production and use of all forms of forest products. The work consists of investigations of physical, mechanical, and chemical properties of various species of wood, of conditions affecting these properties and the use of the woods in various industries, and of fundamental principles underlying various processes and methods of utilization. It includes also statistical studies relating to the production, value, and uses of various woods.

The work is centered at the Forest Products Laboratory, Madison, Wis. The direction of the laboratory is the administrative head of the branch and is responsible to the Forester for the technical methods used in all work and for the executive supervision of work conducted outside of the National Forest districts. Other offices of products are maintained in Districts 2, 5, and 6, and in Washington, D. C. When products work is required in District 1 or in Districts 3 and 4, the District Forester concerned will take the matter up with the director of the Forest Products Laboratory, who, upon approval of the proposed work, will make the necessary arrangements. In cases where a man is detailed for work in any of these districts he will report directly to the District Forester. All correspondence from the districts will be addressed to the director.

CHARACTER OF WORK.

Work conducted by the branch is along the following general lines:

Mechanical and Physical Properties and Structure of Woods.

Mechanical properties.—The tests of mechanical properties are primarily for the purpose of accumulating reliable information on the strength of various species and forms of timber. The results are of value to engineers, manufacturers, and other users of wood in enabling them to employ the various species and forms most advantageously, and frequently to substitute less well-known species for those which have been commonly used but are becoming scarce.

The work covers tests on small specimens to determine the properties of the clear wood, tests on structural sizes containing the defects ordinarily found in such timbers, tests on manufactured articles, and tests to determine the effect of preservatives, preservative treatments, and other commercial processes on the strength of woods.

Physical properties.—A knowledge of the physical properties of wood in general and of the various species individually is essential to the most efficient utilization of the material. Not only is such knowledge of importance in connection with the studies of structural and mechanical properties, but it is especially necessary for successfully conducting the investigations relating to wood preservation and other wood-using industries. The investigations cover studies of the fundamental physical properties, such as thermal properties, penetrability to liquids and gases, hydroscopicity and density; they include also experiments in air-seasoning, kiln-drying, and transformation of wood.

Relation of structure to properties.—The microscopic structure of wood is very closely related to its physical and mechanical properties and uses. A detailed study of the structure of various commercial species will be made, the results of which will be valuable in indicating the uses to which the species are best adapted, and will assist in the determination of other properties and of the behavior of the woods under various treatments.

WOOD PRESERVATION.

The study of wood preservation deals with the protection or preservation of wood from decay, fire, insects, and other destructive agencies. Of these, decay

is the most important and is the one with which the investigations are mostly concerned. The work covers investigations of preservatives used, of processes for injecting the preservatives, and of the suitability of various species for treatment. It consists of laboratory experiments, of cooperative field work, and of tests of various forms and species of wood treated by different preservatives under actual conditions of service.

DERIVED PRODUCTS.

Besides the investigations which deal with wood as such, investigations are made of products other than wood derived from wood, bark, and leaves, and from the living tree. The purpose of the work is to increase the efficiency of the processes employed, to increase the yield of valuable products, and to discover means of producing new products. Such investigations make possible the utilization of parts of the tree now wasted and of species for which there is now little demand. The field covers the following lines of work:

Pulp and paper.—This work includes the study of the suitability of different species of wood for the production of paper pulp and the determination of the effect of the various fundamental processes on the quality and quantity of pulp produced. It covers the production of pulp by both mechanical and chemical means.

Wood distillation.—The investigations consist of (1) a study of new species; (2) of the development of more efficient methods of producing and refining the products secured; (3) the determintaion of the properties and uses of the products not readily marketable at present. Investigations are conducted both with hard woods and resinous woods.

Naval stores.—The object of this work is to determine the suitability of species other than the southern pines for the production of turpentine and rosin and to study methods of improving turpentine operations which will result in an increased yield of the valuable products and conserve the available supply of timber.

Other products derived from wood.—The field of work covers the production of tannins, ethyl alcohol, gas, and all other valuable products which may be obtained from wood or wood waste as the principal raw material.

STATISTICAL STUDIES.

The statistical studies deal with the extent of production and utilization of forest products, the occurrence and reduction of waste, and the increase of efficiency in the utilization of wood in the manufacture of various products. The field includes the collection in cooperation with the Bureau of the Census of statistics showing the annual production of the major forest products and the collection of statistics of quantity and kind of wood consumed by the various wood-using industries, the average prices of lumber f. o. b. mills and markets at representative points throughout the country, and of miscellaneous studies, such as the quantity of preservatives annually consumed for wood preservation.

SCOPE OF WORK.

The work outlined above necessarily covers two distinct fields: (1) Fundamental investigations, and (2) commercial application of principles determined by the investigations. The investigations are conducted primarily at the Forest Products Laboratory and at other stations which are provided with facilities for conducting experimental work. The study of commercial application is conducted in localities which may be most suitable for the specific problems under investigation.

In the study of the properties of wood, the selection of the species, form, and condition of material for investigation is the important consideration. The work will be confined mainly (1) to species at present used extensively in this country, and for which further knowledge of their properties, uses, and suitability for various uses is needed; (2) to species not at present used extensively in this country, but of which there is a sufficient supply to render them of commercial importance; (3) to various forms of waste which occur in sufficient quantity to be of commercial importance.

In the study of processes and methods, the selection of the processes and the fundamental features in their operation is the important consideration. The work should be confined mainly to (1) processes at present established and

used in the production of products of wide commercial importance, but whose efficiency may be increased by a more scientific knowledge of the fundamental principles involved in their operation; and (2) new or proposed processes which promise to increase the efficiency of production or of utilization of certain valuable materials.

In the statistical work, the needs of the other activities of the branch and of the entire Service will be kept constantly in view. In addition to those statistical studies which are conducted periodically at regular intervals, others will be undertaken from time to time as the needs of the wood-producing and wood-consuming industries or the other activities of the Forest Service may require.

COOPERATION WITH COMPANIES, ORGANIZATIONS, AND INDIVIDUALS OUTSIDE OF THE FOREST SERVICE.

In all of the work it should be the general rule to secure to as large an extent as is practicable the cooperation of the wood-using interests most directly concerned with the solutions of the problems. The exact terms of cooperation and desirability of undertaking such cooperation will be determined for each specific case in accordance with the following general policy:

(1) Whenever practicable, arrangements will be made with those especially interested in the investigation to be undertaken to furnish all or part of the material necessary for the work.

(2) Investigations of patented or proprietary processes, materials, or articles will be undertaken only when the results of the investigations are needed by the Service or will be of general public benefit. Such work will not be undertaken solely for the benefit of the individual or company interested. If undertaken, it is immaterial whether the company or individual is a cooperator to the work, but the arrangements should be such that the Service obtains the best conditions for making the investigation. In no case will a charge be made by the Service for the work, but the individual or company interested may furnish free of charge the materials or facilities for making the examination. In publishing the results of such investigations, the name of the process, material, or article tested should, when used, be preceded by a qualifying clause, such as "preservative sold as."

(3) The design, construction, and operation of commercial plants in wood preservation, wood distillation, kiln-drying, or similar work may be undertaken, provided the plant is to be used, at least for a time, for experimental work for the purpose of gaining information of which the Service is in need. If the Service would gain no new information from the operation of such a plant, its design, construction, and operation should not be undertaken, but all assistance and available information, including the designs and specifications for standard plants which may have been prepared, should be made accessible to the inquirer. In such cases the Service may also refer applicants to consulting engineers and may indicate what should be the approximate cost of plans and specifications as are desired, and when requested to do so may inspect such plans when prepared, and even at times detail a representative to demonstrate to the person or company who has constructed the plant improved methods of operation.

(4) The Service may on request make examinations of the methods of individuals, companies, or corporations in handling forest products and prepare plans for the improvement of such methods, provided that the purpose of the Service in undertaking such work is primarily to reduce the waste in handling and utilizing forest products and to obtain information that will be generally useful in the industry concerned. If no new information is likely to be obtained, work should not be undertaken and the applicant should, if possible, be referred to a consulting expert.

(5) In cases of active cooperation, such as is outlined in the two foregoing paragraphs, there should be a remuneration to the Service based on the total cost of the service rendered, including supervision, but such cost should be reduced by the extent to which the work is experimental. When practically all of the work is investigative and the results are of value to the general public, a large share of the cost may be borne by the Forest Service.

(6) In all work undertaken in cooperation with any company, organization, or individual the right to the first publication of the results will be reserved by the Forest Service.

DUTIES OF PRODUCTS MEN IN DISTRICTS.

Close attention should be given to problems arising in the utilization of forest products on the National Forests. To assist in this Products representatives are assigned to certain districts, their duties being as follows:

(1) To carry on investigations for administrative purposes at the direction of the District Forester. Such investigation should be closely coordinated with or made a part of the district work in Silviculture.

(2) To carry on investigations for scientific purposes in forest products, in accordance with the approved program of investigative work and under the direction of the Branch of Products. The duties and responsibilities of the District Foresters in reference to such investigations are stated in Service Order 41, and are identical with their duties and responsibilities in connection with other lines of investigative work in the districts.

Investigations for administrative purposes will have priority and should take precedence over scientific investigations, when necessary, in the judgment of the District Foresters, subject to the following procedure:

(1) The cost of investigations to secure information upon which to base timber sale contracts or policies will be paid from G. A. funds, except as noted below.

(2) When, in the opinion of the District Forester, it is deemed expedient to withdraw a man from general investigative work in Products and assign him to administrative work in connection with timber sales, the District Forester should:

(*a*) Notify the chief of Products in cases where it is necessary to make other arrangements for continuing the investigative projects.

(*b*) Provide for the expenses incident to the administrative assignments from G. A. funds and not from funds allotted for the investigative projects in Products.

(3) When it is necessary for a man assigned to general investigative work in Products to devote only a part of his time to administrative assignments, and such assignments do not materially interfere with his investigative work, his entire salary may be paid from the allotment for Products, but in all cases the traveling and other expenses incident to administrative assignments should be paid from G. A. funds and charged to timber sales. When the full time of the man is required for such administrative assignments he should be transferred from the general investigative work to timber sales, and other provision made for conducting the investigative projects which have been assigned to him.

DUTIES OF SUPERVISORS IN RELATION TO PRODUCTS WORK.

That the Products work in the districts may be of most value to the administration of the National Forests, it should be the duty of the supervisor to request the District Forester for information regarding the strength or other properties of wood on their forests; to call to the attention of the District Forester the unmarketable species on their forests which occur in sufficient quantities to warrant an investigation of their properties and suitability for pulp, alcohol, turpentine, or other wood products, and also to cooperate with the Products representatives in investigating the supply and demands for stumpage upon their forests, the extent, character, and cost of logging operations in the vicinity, the use and manufacture of different classes of timber, and the demand for various forest products. They should ascertain possible uses for dead timber, inferior species, and material not used in current sales, and should make every effort to promote the use of such classes of material by informing possible purchasers. In this connection the work of Products will closely correlate with that of timber sales.

In the permanent improvement work on the Forests the supervisor will be given all possible assistance in applying a proper preservative treatment to the timbers used, such as poles, posts, etc. When in the judgment of the supervisor a preservative treatment is advisable and practical, he should communicate with the District Forester before such timbers are put into use. If a preservative treatment is decided upon, it should be given in accordance with the instructions contained in the publication entitled "Instructions for the Building and Maintenance of Telephone Lines on the National Forests."

At the discretion of the District Forester, small experimental treating plants will be constructed and operated on or near National Forests where they will be of value to the Forests and to the community. The object of such plants will

be to educate the people in the use of wood preservatives and to promote economical utilization. Recommendations for the establishment of such plants should be made to the District Forester by the supervisor.

In general, the district office, as well as the Madison Laboratory and other stations, will, so far as possible, give assistance and information to individuals or organizations in developing and carrying out systematically the practical utilization of all Forest products.

IMPROVEMENTS.

POLICY.

It is but natural, from their situation, that the National Forests represent pioneer conditions. For a long time it will be necessary to expend time and money on the construction of improvements which will afford security against fire and make the resources of the Forests fully available. Not only will the fund specifically appropriated be used, but, so far as may be permitted under the terms of the appropriations for general expenses, such work will be carried on in connection with general administration. In all cases the classes of improvement work which afford security against fire will be given preference over those classes which help to make the Forest resources available. Proper protection and the fullest use of the Forest resources depend mainly upon facilities for transportation, communication, and control. All parts of the Forests should be accessible by roads and trails; there should be telephone communication between settlements and Forest officers' headquarters and with lookout stations; and in most cases suitable living accommodations must be provided for the field force. For the fullest use of the forage resources water for live stock may have to be developed and range fences constructed; to reduce the hazard and the cost and difficulty of controlling forest fires, firebreaks and other works must be constructed.

The construction and maintenance of improvements require the most rigid economy consistent with the fulfillment of their purposes, particularly since they afford greater opportunity for inefficiency and extravagance than any other line of work. Because of these facts all plans for improvements demand the most careful consideration both as to preparation and execution. The Forest Plans section of the Manual provides that the improvement plan shall be shown on a map or maps supplemented by reports which cover the need, character, and cost of the projects.

TRANSPORTATION.

Adequate facilities for travel and transportation are of first importance. Trails and roads may be constructed by the Forest Service, but steam or electric roads and boat lines operated by private interests are to be utilized as a part of the transportation system, available for use by Forest officers.

Transportation Plans.

The need for extension of transportation routes on each Forest should be determined by the District Forester from information prepared by the supervisor. This information will show for each ranger district the number of miles of roads and trails or other means of travel for each township, the total value of the Forest property, the rental value, the fire liability, and the annual cash and unrealized revenues. If it is desired to show a percentage of accessibility, twelve (12) miles of road or trail to each township should be taken as the standard. Territory which can be readily traveled by saddle horses and by boat is to be classed as provided with standard means of transportation. Such territory should be appropriately designated on the improvement map.

Map.

Plans for extending the transportation system will be shown on a map on which the existing routes are also shown. It should be supplemented by estimates of cost of the projected improvements, the estimates to be in sufficient detail to indicate the character of the construction. Methods for the location and survey of roads and trails are given in the Instructions for Making Forest Surveys and Maps.

Roads and Trails.

All roads and such trails as will eventually be widened into roads should, when it is feasible, be surveyed by a competent engineer. The ultimate neces-

sary road system should be determined, and those roads which unquestionably will be built should be located immediately and the right of way secured against alienation.

A system of roads should be planned which will place every portion of the Forest within a distance of at least 7½ miles of a wagon road, and it will be the aim of the Service to complete such a system as soon as practicable. A pack train can then transport supplies from the point to which they are delivered by wagon to any field camp and return in a single day.

Bridges.

Bridges other than very simple ones should be planned in detail so that the District Forester can approve their design and method of construction.

Water Transportation.

When navigable waterways present means of transportation the improvement plans should include estimates for the construction or purchase of boats, launches, or ferries.

Speeders.

When they can be used without too great danger and when the permission of the owners can be obtained the use of speeders, motor cars, and hand cars on railways and logging railroads should be carefully considered, and their utility and cost should be set forth in the improvement report.

Purchase of Equipment.

The purchase, rather than the hire, of pack animals, teams, wagons, scrapers, road graders, stump pullers, and other road-building equipment should be considered if it is evident that a very effectual saving can be made. The possibility of using this equipment in fire protection will also influence its purchase. In reporting on the purchase of horses or other live stock, the cost of maintenance, including wintering, should be given particular attention.

COMMUNICATION.

Of scarcely less importance than the system of transportation is the system of communication, which includes telephone lines, signal systems, and mail service.

Signals.

In the absence of telephone communication a signal system may be devised, though it has been found that they are not satisfactory even under the most favorable conditions; they should, therefore, be considered as a temporary makeshift, to be replaced by telephone communication as soon as practicable. If a supervisor desires to adopt a signal system, he will report to the District Forester, describing in detail the particular system which he wishes to install. If approved, the District Forester will issue definite instructions for its installation.

Mail Service.

While the Post Office Department is extending its service just as rapidly as conditions warrant, it may happen that, owing to the rapid development of the National Forests, the Post Office Department is not fully informed of the need for additional service. When the supervisor becomes satisfied that additional service is justified he should lend such assistance as may be proper to residents who may petition the department for increased mail facilities, or he may report the situation to the District Forester. If the District Forester approves, he may prepare a Secretary letter addressed to the Postmaster General describing the situation and requesting additional service.

Telephones.

Telephone communication is indispensable to fire protection and to quick and efficient methods of conducting National Forest business. After the transportation system has been reasonably developed, telephone communication is of the greater importance and should be given precedence.

The ultimate telephone system on the Forests will undoubtedly represent a very large investment and the maximum efficiency and service must be aimed at. Full details of construction are given in the circular "Instructions for the Building and Maintenance of Telephone Lines on the National Forests."

Telephone Plans.

The plan for a telephone system will include a map and a report. The map will show existing Forest Service and private lines and their character, and the location of exchanges and instruments, also the location and character of all new construction which will be necessary to meet the needs of Service business during the next five years. In addition, the map should show high-power electric transmission lines, roads, trails, ranger stations, lookouts, and all other points which may influence the establishment of the system.

The report will discuss, in the order of their importance, the proposed new lines, their need, location, character, and cost. The telephone systems should be grouped by natural divisions and each division designated by its two terminals. A branch line should be designated by its terminal and the divisions of which it is a branch.

The District Forester will prepare, from the information furnished by the supervisors, a map of the entire district, showing the existing and proposed lines; this will insure coordination of plans between the various Forests and with the private systems. He will then issue instructions covering the general plan of the telephone system for each Forest.

RANGE IMPROVEMENT.

For the complete and most economical use of the forage on the Forests, water may have to be developed and fences, corrals, bridges, trails, and other works constructed. Since such works directly benefit the stockmen, the Forest Service will allot funds for their construction only in exceptional cases when the benefit to the Forest plainly warrants the expenditure. The expenditure of funds for these purposes can sometimes be made more effective if the assistance and cooperation of interested stockmen can be secured.

The location and character of works needed for this purpose should be shown, so far as possible on the improvement map, supplemented by a report describing the conditions which indicate the desirability of their construction, and the specific nature of the works proposed, and their cost.

TIMBER SALE IMPROVEMENTS.

Generally, timber operations on the National Forests are so extensive that the purchaser can be expected to construct all the works necessary for the removal of the timber, and the usual policy of the Service will be to offer no assistance in the actual construction of such works. If, however, bodies of timber can be made accessible to small operators and the sale of timber made certain by the construction of roads, chutes, or flumes, or by clearing streams for driving, these works may be undertaken by the Service, and the supervisor should include the necessary recommendations, with a description and estimate, in his improvement plans.

PROTECTIVE IMPROVEMENTS.

Firebreaks, lookout stations, and other works required to protect the Forests from fire are dealt with in the Forest Fire Potection Plan. In the improvement report the supervisor should include a summary of the works of this character, and give a very brief description and estimate of their cost.

Ranger Stations.

Buildings may be constructed for the field force to afford necessary shelter and to furnish an office for the efficient transaction of business. Land may be cultivated for the economical production of forage crops, and fences built to insure needed pasturage for live stock used by Forest officers in their work. The buildings may be substantial houses to be used throughout the year, or they may be merely such structures as will afford the necessary shelter and domestic conveniences for officers during summer. These summer camps should be constructed where needed for the use of patrolmen, officers in charge of timber sales, or at such points as will serve the needs of officers traveling through the Forest.

Cost.

Under the provisions of the appropriation act of March 4, 1911 (36 Stat., 1246), the cost of any building shall not exceed $650. It is expected, however, that this limit will not be reached, except possibly in the case of rangers' headquarters. Summer quarters ordinarily should not cost more than $150.

Barns, sheds, and other small structures may be constructed at ranger headquarters when needed. Corrals may be built in connection with barns or pastures.

Office buildings may also be constructed for the use of district rangers or for summer headquarters of the supervisor when the necessity can be shown.

Plans for the erection of buildings or fences, to insure pasture or crops, will include a map to show their location and a report setting forth their need, character, and cost. In preparing plans and specifications for buildings the designs given in "Standard Plans for Buildings" should be consulted.

Survey of Administrative Sites.

As rapidly as possible, all administrative sites used as headquarters for Forest officers should be accurately surveyed and mapped on a scale of not less than 4 inches to the mile. This map should show topography, cover, soil, and the location of all improvements. The accompanying report should describe conditions and improvements, and should outline plans for the future development of the site for administrative purposes.

PROCEDURE.

Allotments.

Allotments to the Forests from the improvement fund will be made by the District Forester, in conformity with the improvement plan, to provide for the construction of specific projects. Allotments will also be made, on the basis of the supervisor's annual estimates, for specific projects of maintenance of improvements, which can not be carried on by the regular field force in the time available for such work. Specific projects which have been approved and allotted for can not be abandoned without the approval of the District Forester. Supervisors may transfer a part of the funds allotted for one approved project to another project, provided the transfer does not involve the abandonment of any project.

Improvement Contingent.

A contingent fund of approximately 5 per cent of the improvement allotment to the district should be reserved at the beginning of the fiscal year by the District Forester. Allotments to complete the more important approved projects, the cost of which has been underestimated, should be made before this contingent is subsequently allotted to new projects of equal or lesser importance.

Cost Keeping.

The cost of each project will be kept separately. In the case of large projects a classified cost record should be kept; this will serve as a measure of efficiency and also as a guide in future work of the same character.

Annual Statistical Report (Form 446).

Supervisors will include in their annual statistical report (Form 446), for each class of improvement: (1) The amount completed at the beginning of the fiscal year for which the report is to be made; (2) the amount made during the fiscal year; (3) the total to June 30 (being the sum of 1 and 2); and (4) the present value of the total improvement, estimated on the cost of replacing it, both labor and material, less the depreciation if the improvement is not now practically as good as new.

Cooperation.

Many of the improvements proposed will be of service to the general public, and every effort should be made by the supervisor to obtain the assistance and cooperation of individuals and of the county authorities in the construction of such projects.

Rights of Way.

Rights of way for telephone lines should be obtained by purchase. The form, a sample of which has been issued to the supervisors, should be used. Ordinarily the nominal sum of $1 should not be exceeded in purchasing rights of way.

Rights of way for roads and trails will generally be granted free of charge by landowners, but when they can not be so obtained and the road or trail is an important one, the assistance of the county should be sought to have a right of way condemned.

Title to Lands for Improvement.

Buildings and other structures should be erected only on withdrawn administrative sites or on National Forest land, which has been properly posted. If Government land is not available the land should be leased. The policy outlined under "Quarters" should govern supervisors in the matter of leasing land.

Signs.

All trails and roads in or outside the Forests used by Forest officers in the transaction of their duties, and all streams and other prominent natural features should be provided with suitable direction or identification notices or signs.

Disposal of Débris.

All débris and refuse resulting from improvement work should be properly disposed of in order to reduce the fire hazard and to insure neatness and cleanliness.

Contracts.

Improvement work can often be performed more economically by contract than by day labor. Contract work, to be successful, requires extreme care in drawing up the specifications and close supervision on the ground during construction. In order to guarantee a satisfactory fulfillment of the contract, it may be necessary, in some cases, to detail a Forest officer to the project until it is completed.

Request for Bids.

When the supervisor decides to let a contract for improvement work he will prepare the request for bids on Form R. The specifications should describe the project in minute detail. In addition to the quantity of material required the quality should be stated. In every case where it is necessary to give a clear understanding of the project the form should be accompanied by blue-print drawings or plans. All accompanying papers should be securely fastened to the form and upon it should appear the statement. "In accordance with the attached plans and specifications which form a part of this bid."

Bids should be sent to as many prospective bidders as practicable, and every effort should be made to secure the best possible terms for the Government. The procedure which covers the authority of officers to accept bids is given under paragraph 25 of the Fiscal Regulations.

THE PURCHASE OF MATERIAL.

Contracted Materials.

Contracts for certain classes of material used in improvement work are let by fiscal years. Notice will be sent supervisors before July 1, giving the names of successful bidders and the contract price for each class of material. Supervisors will order material for which an annual contract has been let only from the contractors.

Care must be taken to furnish exact shipping directions, together with a Government bill of lading, and instructions regarding its use, whenever material is ordered.

Purchase of Barb Wire.

Barb wire is ordered and charged for by pounds, but furnished in reels, which are not exactly uniform in weight. Consequently the total pounds furnished may be little more or less than ordered. The following model may be used in preparing Form A, to be sent when an order for barb wire is placed:

_____ reels 2-pt. galvanized Glidden barb wire,
_____ pounds,
at $3.05 per cwt.
Annual contract.

If the signed voucher when received from the company checks with the shipment, it should be certified and mailed to the District Forester for payment; otherwise a new form should be prepared and returned to the company for signature, together with a letter of explanation. An addressed franked envelope should always be included with orders. The weights per mile of the two kinds of wire usually furnished under contract are as follows:

	Pounds.
2-pt. galvanized Glidden barb wire, approximately	330
2-ply barbless wire, approximately	310

Standard Telephone Equipment.

Before ordering material for telephone construction the circular "Instructions for the Building and Maintenance of Telephone Lines on the National Forest," should be consulted to secure conformity with the standards of construction and equipment prescribed therein.

Telephone Wire.

In ordering telephone wire the amount desired should be given in miles, although payment is made by the pound. No. 12 BB. wire weighs approximately 165 pounds per mile and No. 9 BB. about 330 pounds. Both wires are furnished in one-half-mile coils.

The following form is a model Form A to use when telephone wire is being ordered. If a voucher covers both annual contract and uncontracted material, the words "Annual contract" should be placed opposite each item which is on the contract list, instead of being written at the bottom of the Form A.

6 miles (____ pounds) No. 12 BB. galvanized-iron telephone wire, at $3.89 per hundredweight.
2 miles (____ pounds) No. 9 BB. galvanized-iron telephone wire, at $3.68 per hundredweight.

(Annual contract.)

"U. S. F. S." Stock.

The contract price for the current year should always be stated on the voucher. In ordering, the statement should be made that the wire is to be shipped from the stock sealed and stamped "U. S. F. S.," and shipments received without this seal and stamp should not be accepted.

Insulators and Brackets—Instruments.

Insulators and brackets are included in the annual contract. In the case of instruments and extension bells, the type should be given, whether 1,000, 1,600, or 2,500 ohm resistance, and orders for all other equipment and tools should conform as nearly as possible to the names and descriptions used by the company. Catalogues or booklets of the accepted bidders for different classes of material will be furnished supervisors each year.

PURCHASE OF IMPROVEMENTS.

When there are suitable quarters or other improvements on an unperfected entry within the Forest, and the claimant desires to relinquish his claim and dispose of the improvements, their purchase may be considered.

In such cases the policy and procedure outlined in Reg. L–41 and in the instructions covering Administrative Sites (p. 53) and under Quarters (pp. 19–21) should be followed strictly.

After the relinquishment has been made and the purchase authorized by the District Forester, the supervisor will complete the purchase and submit the Form A to the District Forester, together with a bill of sale (which must be properly witnessed and acknowledged), executed by the former owner. In no case can the purchase price of a building exceed $650.

Relinquishment of Unperfected Entry.

The land on which purchased improvements are situated must pass to the control of the United States by lease if patented, and in such case the lease must contain a clause providing for retention by the United States of title to the improvements and the right to remove them at the expiration of the lease, or by lease or relinquishment if an unperfected entry. (See Quarters—Leasing Ranger Stations, p. 20.) The relinquishment must be entirely voluntary (see Reg. L–41), must be on the regular land office form, and must be filed in the proper land office before payment for the improvements will be made. A copy of it will be forwarded with the Form A and the bill of sale to the District Forester.

PROPERTY.

CUSTODY AND ACCOUNTABILITY.

Responsibility.

Each member of the Forest Service will be held responsible for the proper use and protection of any Government property which may come into his

custody or control in any manner whatsoever. Economy must be observed in requisitioning or purchasing supplies and equipment. Articles must not be requisitioned or purchased unless the need for them is established, nor should they be obtained in excessive quantities. Expensive articles must not be used when cheaper articles will answer the purpose equally well.

Individual Accountability.

Each member who receives property must receipt for it, and in addition to assuming responsibility for its proper use and protection must account for it as prescribed in the following procedure. Having receipted for a nonexpendable article, a member will be relieved of responsibility and accountability only on a receipt from another member after a duly authorized transfer of the article has been made, and the transfer has been recorded by the property auditor, or by an approved certificate of loss or sale, or by reimbursing the United States for the value of the article. No receipt should be signed until its correctness has been verified, nor until the articles to be receipted for have been checked and actually delivered to or placed at the disposal of the member signing the receipt. The fact that these precautions were not taken will not relieve the member from responsibility in the event that a discrepancy is discovered after the receipt has been signed and the member has been charged with the articles on the records of the property auditor.

Service Accountability.

A record of all the property of the United States in the custody of the Forest Service will be kept by the property auditor. The record of improvements on the National Forests will consist of signed maps and returns, filed annually by the supervisors, through the District Forester, which will show the kind, number, and cost of all improvements existing at the date of the return.

The record of nonexpendable property will show the total number and value of all the articles in the Service and the number and value of each article charged to the members individually.

The record of expendable property will show the kind, quantity, and value of the articles (including printed forms) obtained for use during the preceding fiscal year and on hand in depots at the end of the preceding fiscal year.

Expendable and Nonexpendable Property.

All articles of supplies and equipment used in the Service, whether fabricated, purchased, or requisitioned, are deemed nonexpendable, and must be accounted for to the property auditor, except those specified in the List of Expendable Articles (Form 262). This list will be furnished upon request by the property auditor.

Supply Depot, Ogden, Utah.

A depot of supplies is located at Ogden, Utah, where a stock of standard articles of equipment, supplies, and blank forms is carried. The depot is provided with facilities for the printing of letterheads and for the manufacture of rubber stamps. A field purchasing agent is located at the depot to facilitate the prompt purchase of standard articles and to assist the District Foresters and Forest supervisors in procuring supplies and equipment other than standard when authorized by the Forester.

Requisitions.

Standard supplies and equipment (see Form 261, List of Standard Articles of Equipment and Supplies, and Form 258, Index of Standard Forms), may be procured upon requisition on the property clerk. Requisitions for standard articles for use on the National Forests must be signed by the supervisor, and for other administrative units and for field parties by the officer in charge. Requisitions for supplies and equipment other than standard articles must be signed by the District Forester or by an equivalent executive officer.

Requisitions must be in duplicate on Form 668. One signed copy will be sent to the property clerk without a letter of transmittal, unless an explanation is necessary. The other copy will be retained for checking the articles when received from the property clerk. On the first day of January, April, July, and October of each year supervisors, chiefs of maintenance, and officers in charge of experiment and other field stations will make requisition for the equipment, stationery, office supplies, and printed forms required in their work, respectively, during the ensuing three months. Each sheet must be marked "Quarterly Requisition." The property clerk is not expected to fill

quarterly requisitions immediately upon their receipt. All other requisitions, however, will be filled promptly, and any delay should be reported to the property clerk by letter and a copy sent to the District Forester. Quarterly requisitions should be made as complete as possible, and special requisitions should be avoided, since this will facilitate the economical and efficient handling of the work at the supply depot.

Shortage or Error in Shipment.

Shipments will be carefully checked and responsibility for error fixed before leaving the supply depot. Upon receipt of a shipment the consignee must at once unpack it and check the articles against the retained copy of the requisition and the invoice Form 939. If any discrepancy is discovered, the property clerk or other consignor must be immediately informed.

Methods of Shipment.

Supplies will be sent by mail under frank when practicable, and all shipments so made must comply strictly with the regulations of the Post Office Department. Copies of these regulations are obtainable from the supply depot.

Large shipments will be made on departmental bills of lading, by freight, but may be made by express when necessary. Shipments should not be prepaid except when the transportation company is engaged in local business only and refuses to accept the shipment on department bill of lading.

The headquarters of some supervisors are located in towns remote from the railroad, but reached by stage lines with which express companies have no connection. Shipments on bill of lading to these points will be made to the nearest or most covenient station from which, by previous arrangement, the shipment will be forwarded to destination. When this is done notation of the fact will be made on Form 939 and on the package. In such cases the forwarding charges only should be paid by the consignee, for which a receipt showing rate and weight must be taken and submitted with the monthly reimbursement account or with a Form A voucher. When the payment of charges is demanded on shipments which are marked "Prepaid in full to destination," the consignee should secure definite information from the consignor before making payment.

Property Procured by Purchase.

Forest officers (except a purchasing agent) making a purchase under a letter of authorization of expendable or nonexpendable articles will prepare three copies of Form 939. One copy will be retained as an invoice. A second copy will be signed as a receipt and sent with the voucher covering the purchase to the district fiscal agent. The third copy will be sent to the property auditor. This is required whether the settlement is on Form 4 or on Form A voucher. The property auditor, upon receiving the copy from the district fiscal agent, with his indorsement of payment thereon, will indorse upon the copy received from the member making the purchase a certificate that the nonexpendable articles have been charged, and return it to the member. Reimbursement vouchers (Form 4) containing property will not be paid unless accompanied by Form 939.

A purchasing agent making a purchase of property under a letter of authorization will prepare, by carbon duplication, two copies of purchase order, Form 942, and two copies of Form 939. He will keep one copy of the Form 942, and sign and send the other copy to the dealer, with a properly prepared Form A voucher, to be signed by the dealer and returned to the purchasing agent. When necessary he will send the dealer a department bill of lading with the order and voucher. He will initial the Form A voucher returned by the dealer and send it to the member to whom the property is to be charged. At the same time the order is sent to the dealer the purchasing agent will send one copy of the Form 939 to the member and the other copy to the property auditor.

The member, upon receipt of the property, will enter in the spaces provided on the copy of the Form 939 received from the purchasing agent the condition of the property and the date of its receipt. He will sign the Form 939 as a receipt, and the Form A voucher, and send them to the district fiscal agent.

When the voucher is paid the district fiscal agent will enter the number of the paid voucher on the Form 939 and send it to the property auditor.

The property auditor will charge the nonexpendable property to the member and send him the copy of the Form 939 received from the purchasing agent, with a certificate indorsed thereon that the nonexpendable property has been charged.

Forest Custodian.

The District Forester will designate a custodian for each Forest, who will be accountable for the equipment used on the Forests. He may, in his discretion, designate either the supervisor or the forest clerk as custodian, and when the latter is designated the supervisor should be instructed to transfer, on Form 939, all the property with which he is then charged on the records of the property auditor. Before making a transfer of this kind the supervisor should prepare a property return and forward it to the property auditor, by whom it will be verified and returned to the supevisor. The property return should then be made the basis for the transfer to the forest clerk. This procedure will be followed in subsequent transfers. The supervisor will be held responsible in all matters relating to the supplies and equipment used upon the Forest, except for their custody and record when the clerk is custodian. He is responsible for furnishing adequate quarters for storing and means for protecting supplies and equipment, even though the clerk is designated custodian. Instruments and other nonexpendable articles must be kept under lock, and the key will be retained by the custodian.

Property Procured by Transfer.

When expendable property is issued by a property clerk to a custodian two copies of Form 939 will be prepared and signed by the property clerk. He will keep one copy and send the other to the custodian to whom the property is issued.

Transfer of nonexpendable property between members of the Service, except as provided under property accounting on the National Forests, will be made in accordance with the following procedure:

When nonexpendable property is transferred by the property clerk to a custodian three copies of Form 939 will be prepared and signed by the property clerk as invoices. He will send two copies to the property auditor and the third to the custodian.

The custodian, upon the receipt of the property, will enter, in the spaces provided on the Form 939 received from the property clerk, the condition of the property and the date of receipt; he will sign it as a receipt and send it to the property auditor.

The property auditor, upon receiving the Form 939 from the custodian, will credit the property clerk and charge the custodian with the property transferred. He will indorse upon the two corresponding forms (939) received from the property clerk a certificate of the transfer, and send one to the property clerk and the other to the custodian.

The property clerk or other custodian who transfers property is not relieved of accountability until the receipt of the member to whom the property is transferred has been received by the property auditor and the transfer has been recorded.

On Forests where the supervisor is custodian nonexpendable property received in his absence will be receipted for on the Form 939 by the acting supervisor in this manner:

"JOHN JONES, *Supervisor.*
"By WILLIAM SMITH, *Acting Supervisor.*"

This procedure will be followed by other members in charge of executive offices or field stations.

Property to Individuals.

When property is transferred to a member as an individual and not as an officer in charge, he must sign the Form 939.

When nonexpandable property is furnished for temporary use by a custodian to another member a receipt will be taken, but the transaction will not be reported to the property auditor, unless the member fails to return the property within the time agreed upon, in which event a transfer should be effected in the manner herein prescribed.

PROPERTY ACCOUNTING ON THE NATIONAL FORESTS.

Custodian's Record.

An account will be kept on property record cards (Form 331) of all nonexpendable articles obtained by the supervisor through purchase or requisition. This account may include, in the discretion of the supervisor, expendable articles also. The cards will be filed alphabetically by names of articles, and

will show the total number of each article, number of each issued to subordinates, and of those kept on hand for distribution. Each transaction which affects the property on a Forest, whether by purchase, transfer, certificate of loss or of sale will be immediately entered on the proper card or cards (Form 331).

The account with "stock" will include only those articles actually placed in stock or transferred thence to or from an individual. In all respects the account with stock should be handled in the same manner as those with individual members.

Property issued by a custodian to a Forest officer will require the preparation and signature by the custodian of two copies of notebook Form 874–16, which will then be sent to the officer. The officer will, upon receipt of the articles, sign both copies, and return one to the custodian and keep the other.

Property returned to a custodian by a Forest officer will require the preparation and signature by the officer of two copies of notebook Form 874–16, which will then be sent the custodian, who, upon receipt of the articles, will sign both copies and return one to the officer.

Property transferred between officers will require that the officer from whom the property is received will prepare and sign three copies of notebook Form 874–16. He will send one of them to the recipient of the property and the other two copies to the custodian. The recipient will, upon the receipt of the property, sign the Form 874–16, which has been previously signed by the transferring officer, and send it to the custodian. Upon receiving the Form 874–16, which has been signed by both officers, the custodian will sign the two copies received from the transferring officer and send one of them to each of the officers concerned. The transfer will at the same time be entered upon the proper card (Form 331), and the transfer receipt (Form 874–16), signed by both officers, will be filed behind a guide card bearing the name of the officer to whom the property was transferred. A notation of the transfer will also be made on the original receipt of the officer who transferred the property.

Property temporarily transferred between officers requires only that a receipt be taken on Form 874–16. The transaction will not be reported to the custodian unless the recipient fails to return the property within the time agreed upon, in which event a permanent transfer should be effected in the manner heretofore prescribed.

The same procedure will be followed when nonexpendable property is furnished for temporary use by custodians to other members of the Service.

Ranger's Record.

The copy of the Form 874–16, signed by the custodian, will constitute the basis for the ranger's record of the property in his custody. Not less than once a year each ranger and all other subordinate Forest officers will, by direction of the supervisor, submit to him in duplicate on Form 874–16 a signed list of the property in his custody. As soon as the correctness of the list is established both copies will be signed by the custodian, who will keep one and return the other to the ranger, when all previous Forms 874–16 relating to the account can be destroyed.

The custodian may, in his discretion, prepare the return and forward it to the ranger for verification and signature.

Loss of Property.

Property lost or stolen must be promptly reported to the District Forester on Form 858, in duplicate, when the member charged with it is satisfied it can not be recovered. The member charged with responsibility will not be relieved unless the statement made on Form 858 shows, beyond doubt, that every reasonable precaution had been taken to prevent the loss or theft, and that every reasonable effort toward recovery was made. When tools or equipment are left for a time in unoccupied cabins, it is required that reasonable precautions be taken to secure the articles against theft. When the property for which the custodian is accountable is lost by any other member than the one to whom it had been issued, the certificate on Form 858 must be signed in duplicate by the member to whom the property was issued, and authenticated by the supervisor or other officer in charge, in the space provided.

The District Forester will, by indorsement in the space provided, on Form 858, either relieve the member from, or charge him with, responsibility for the loss, and will send both copies of the Form 858 to the property auditor.

When the member is relieved from responsibility for the loss the property auditor will credit him on the record and will certify on the Forms 858 received from the District Forester that the decision of the reviewing officer has

been complied with, and that the necessary entries have been made on the property records, and will send one of the forms to the member.

When a member is charged with responsibility for the loss of the property, the property auditor will enter upon the Form 858 the cost value of the property. He will prepare a letter of transmittal (Form 861) to the district fiscal agent at Ogden, Utah, and send the Form 861 and the original of the Form 858 to the member, keeping the duplicate Form 858 in a temporary file. The member will remit the value of the property to the district fiscal agent at Ogden, accompanied by the Forms 861 and 858. Upon receipt from the district fiscal agent of the Form 858 with the certificate thereon that payment has been made, the property auditor will credit the member on the record and send him the Form 585 with a certificate thereon that the necessary entries have been made on the property records to close the account.

Each article lost must be reported on a separate certificate of loss (Form 858); provided, however, that any number of articles lost at the same time and under the same circumstances will be included on one certificate (Form 858). For example, all the articles contained in a lost shipment will be included on one certificate. Report of lost property will not be made on the same Form 858 with report of unserviceable property condemned or abandoned.

Abandonment.

Worn and damaged property and inexpensive camp equipment in possession of field parties may be abandoned in the field when it is impracticable to return it for condemnation as herein prescribed. An explicit statement of the date, cause, and location of an abandonment must be forwarded immediately to the District Forester on Form 858 in duplicate. The action to be taken will then follow the procedure for lost property.

Condemnation of Property Having no Sale Value.

Nonexpendable property worn out or damaged beyond repair which has no sale value will be retained when the supervisor is custodian until it can be inspected and condemned by the District Forester or his authorized representative. Supervisors who have been relieved of the custody of nonexpendable equipment on the Forest by transferring the custody to the forest clerk are authorized to inspect, condemn, and destroy nonexpendable equipment which is no longer serviceable and is beyond repair and which has no sale value. A certificate will be prepared and signed by the custodian on Form 858 in duplicate, on which the inspector will also certify that the property has been inspected, condemned, and destroyed. Both copies of the certificate (Form 858) will be submitted for the approval of the District Forester. The copies will then be sent to the property auditor, who will credit the member on the records and inform him of the action taken by an indorsement on one copy of the certificate.

Instruments of which replaceable parts become broken should not be condemned and destroyed, but requisition should be made upon the property clerk for new parts, which will be classed as expendable. Calipers, for instance, are easily damaged in use by the graduated bar being broken. When this happens a new bar should be obtained by requisition and the instrument repaired.

Condemnation of Property Having a Sale Value.

Nonexpendable property which is worn out or damaged beyond repair or which is of no further use to the Service, but which has a sale value, will be retained until it can be inspected and condemned by an inspector or a district executive officer and its sale authorized in writing on Form 217. When the estimated value of the condemned equipment does not exceed $500 the authorization may be signed by the Forester or the District Forester. When, because of its remoteness and the comparatively small value of the property, the inspection by one or other of the officers specified is impracticable, a list and description of the articles, with specific reasons for their condemnation, may be forwarded to the District Forester. When the estimated value exceeds $500, specific authority must be obtained from the Secretary of Agriculture.

A certificate of condemnation and sale will be prepared by the supervisor on Form 217, in duplicate. The sale of the property will be advertised by notifying interested parties by letter and by posting notices (Form 259) in post offices, telegraph offices, and other public places. No expense will be allowed for advertising, except when the value of the property to be sold clearly justifies such advertisement, and then only by written authority of the Secretary of Agriculture. When the property is sold the officer to whom the authority was granted will pay all necessary expenses, such as auctioneer's fees,

drayage, and purchase of money order, and will remit the net proceeds by postal money order to the district depository, accompanied by a letter of transmittal (Form 861). He will send both copies of the Form 217 to the District Forester.

When the sale is approved by the District Forester he will send both copies of the Form 217 to the property auditor, who, upon receiving through the district fiscal agent the Form 861 with the indorsement of payment thereon, will credit the officer who made the sale and inform him of the action taken by stamped indorsement on one copy of the Form 217, to which he will attach the original Form 861.

Annual Property Return.

Annually, on January 1, a property return will be prepared on Form 330 in duplicate by every member of the Service who is accountable for property on the records of the property auditor. On this return will be entered the articles on hand as shown on the last return, the articles received by transfer or purchase since the last return, the articles disposed of by transfer, by certificate of loss or of sale, and the balance on hand on the date of return. Both copies will be signed and sent to the property auditor. As soon as the correctness of the return is established, both copies will be signed by the property auditor, who will keep one and return the other to the member making the return.

Property Auditor's Report.

Annually the property auditor will furnish each District Forester a statement of the value of all nonexpendable property charged to each of the Forests within his district. He will also furnish upon request of a District Forester a detailed statement of the number of instruments and other articles of equipment of any special kind charged against any or all of the Forests within the district. The property auditor will also furnish the District Forester a statement of the value of the expendable supplies obtained by the respective supervisors within the district, both by requisition on the supply depot and by purchase under letters of authorization. These statements will be used by the District Foresters as a basis for property inspection and for comparing the efficiency of the various supervisors in the handling of equipment and supplies.

Property Inspection.

Periodically an inspection will be made of the property in the hands of Forest custodians. When the inspection is made the custodian will prepare and submit to the inspecting officer a property return (Form 330) in duplicate, in the manner prescribed for the annual property return. The inspector will then check the property on hand against the return. If the property on hand agrees with the return, he will certify to the fact on the return and send both copies to the property auditor. If any discrepancies are found the inspector will make no changes in the return, but will send it to the property auditor, with a letter stating the discrepancies. The inspector will also submit to the District Forester a report on the condition and sufficiency of the equipment and supplies on hand.

Storage.

Property charged to members of field parties, which is no longer needed and which can not be advantageously returned to the property clerk, will be placed in the care of the most accessible Forest officer, and a memorandum receipt taken on Form 874–16. When this is not practicable the property may be placed in storage, but a letter of authorization will be obtained from the District Forester to cover the expense. Storage fees may be paid by the member charged with the property and the receipt of the storage company submitted in his reimbursement account, or on Form A voucher for payment directly to the storage company by the district fiscal agent. Property placed in the care of another member of the Service or in storage remains charged to the member until its final disposition by transfer (Form 939).

Final Settlement.

Final payment for salary or reimbursement will not be made to members severing their connection with the Service who have been in any way responsible for public property until evidence shall have been furnished that it has been properly accounted for. The executive officer in charge will be held responsible for notifying the district fiscal agent before final payment of salary is made, or before final payment is made on reimbursement vouchers.

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